


BYD.41.AH

BYD.41.AH (2)



22101539251



Digitized by the Internet Archive
in 2017 with funding from
Wellcome Library

<https://archive.org/details/b29825234>

ENGLISH PHYSICIANS OF THE PAST.

Short Sketches of the Life and Work

OF

LINACRE, GILBERT, HARVEY,
GLISSON, WILLIS, SYDENHAM,
MEAD, HEBERDEN, BAKER,
J. & P. M. LATHAM, BRIGHT.

BY

R. T. WILLIAMSON, M.D. (LOND.), F.R.C.P.,

Consulting Physician to the Royal Infirmary, Manchester.

ANDREW REID & COMPANY, LIMITED,

PRINTERS AND PUBLISHERS,

AKENSIDE HILL, NEWCASTLE-UPON-TYNE.

1923.

343.41.111. (2)



95450

PREFACE.

The following short sketches of the lives and work of twelve English physicians of the past are not for the learned in medical history and biography, but for junior medical men and students, who have little time or opportunity for the study of medical biography, and yet desire to read brief records of the lives of a few of the men to whom we owe so much. Separate detailed biographies of all of these physicians may be found in our old medical libraries, and more concise records in the various large dictionaries of biography, for those who have the time and opportunity for studying them; but for those who have not, the following short sketches, combined in one volume, may be of interest, and may serve as an introduction to further reading subsequently, if opportunity should occur. In biography much space is often devoted to lengthy discussions of unimportant details and gossip, which though of interest to the learned and curious, and necessary in a complete life record, are often wearisome to the average reader. Such details and discussions have been omitted in these brief sketches.

So far as we know, the physicians whose lives are considered were all men of high character; but it is not on account of their moral character that their lives are sketched. During the recent war, the records of innumerable private soldiers, and probably of every V.C. and D.S.O., will present finer instances of noble deeds than can be described in the lives of the English physicians we shall consider; and in moral character,

men distinguished in medicine, science and literature are so often very little above, and sometimes below, the average Englishman. But on account of the part they played in the advance of English medicine, the lives of the physicians we shall consider are of interest and value.

As Mr. H. F. B. Wheeler has pointed out in his life of Lord Roberts, biography is of little service if it merely interests but does not inspire. It is the writer's hope that the following sketches may stimulate as well as interest.

The lives of many other physicians would have been also suitable subjects for this little work, but those considered were the lives which interested me most. Only physicians who were born before the nineteenth century are considered.

Writing in 1920, the details as to the careers of these English physicians of the past can only be second-hand information; but we have their books in many of our larger medical libraries, which we can to-day all study for ourselves, first hand, if we wish.

The brief accounts of the work of these twelve physicians are based on their published writings. For many details as to their careers I am indebted to Dr. Munk's Roll of the Royal College of Physicians, and to the various separate biographies and biographical sketches indicated subsequently; for many historical details and dates to the standard historical works of Prof. Tout, Mr. Green, and Dr. Collier.

R. T. W.

2, ST. PETER'S SQUARE,
MANCHESTER,

CONTENTS.

THOMAS LINACRE, 1460(?) - 1524.

Founder and first President of the Royal College of Physicians 	7
--	---

WILLIAM GILBERT, 1540 - 1603.

Discoverer of Terrestrial Magnetism and Founder of Electrical Science. President of the Royal College of Physicians, 1600 	20
---	----

WILLIAM HARVEY, 1578 - 1657.

Discoverer of the Circulation of the Blood. Physician to Charles I. 	26
--	----

FRANCIS GLISSON, 1597 - 1677.

Anatomist. Author of the first English Treatise on Rickets. President of the Royal College of Physicians, 1667 	42
---	----

THOMAS WILLIS, 1621 - 1675.

One of the founders of Neurology and of our present knowledge of Diabetes Mellitus 	47
--	----

THOMAS SYDENHAM, 1624 - 1689.

Advocate of the clinical study of Medicine and of personal observation of disease. The "father" of English Clinical Medicine 	52
---	----

RICHARD MEAD, 1673-1754.

One of the founders of Preventive State Medicine 60

WILLIAM HEBERDEN, 1710-1801.

The advocate of careful Clinical Observation and of
the collection and recording of facts ... 66

SIR GEORGE BAKER, 1722-1809.

Investigator of the sources of Chronic Lead
Poisoning. President of the College of
Physicians ... 72

JOHN LATHAM, 1761-1843.

President of the Royal College of Physicians, 1813-
1819 ... 76

PETER MERE LATHAM, 1789-1875.

One of the first English Advocates of Auscultation 80

RICHARD BRIGHT, 1789-1858.

Discoverer of Nephritis ... 87

Concluding Remarks ... 95

THOMAS LINACRE.

FOUNDER AND FIRST PRESIDENT OF THE ROYAL
COLLEGE OF PHYSICIANS OF LONDON.

Thomas Linacre was born in the latter half of the fifteenth century, before the Tudor period, probably at Canterbury about 1460. He was therefore a schoolboy in the reign of Edward IV.

He was educated at the monastery of Christchurch, at Canterbury, under the care of William Selling (also known as Tilly), a diligent classical scholar. Later Linacre became a student at Oxford, and was chosen a Fellow of All Souls. At Oxford, under an Italian teacher named Vitelli, he devoted himself especially to the study of Greek, a language to which very little attention was given at that time in England. It was the custom in Linacre's time for Englishmen who desired to obtain the best instruction in the subject of study in which they were most interested, to visit the Universities of Italy or France, if they had the means to do so; just as in our own time, before the war, so many young medical men visited Vienna, the German Universities or Paris. And hence we find that Linacre, with his old tutor, William Selling, accompanied an Embassy sent by Henry VII. to the Court of Rome.

In Italy Linacre visited Bologna, Florence, Rome, and Venice, and studied Greek with several very distinguished masters. At this time great attention was being devoted to the study of Greek in the Italian Universities, and he thus had the advantages of excellent teaching.

In Florence he was assisted by Lorenzo the Great. He had there the advantage of studying Greek under a distinguished tutor along with the two sons of Lorenzo the Great, one of whom afterwards became Pope Leo. X.

Finally Linacre visited Padua, at that time one of the most famous medical schools of the world. There he took the degree of M.D. with the highest honours.

After spending two years in Italy, and availing himself of these excellent opportunities for study, he returned to England. He was then "incorporated" M.D. at the University of Oxford, and afterwards taught Greek at that University, before the professor's chair in Greek was founded by Cardinal Wolsey. One of his pupils was Thomas More, who afterwards became the celebrated Lord Chancellor, Sir Thomas More.

In 1501, Arthur, Prince of Wales (elder brother of Henry VIII.), resided for a short time at Oxford, and in the same year the Infanta Catherine of Arragon was conveyed to England to be the bride of the Prince. About this time Linacre was appointed by King Henry VII. to be tutor and physician to Prince Arthur; but shortly afterwards the Prince died. When Henry VIII. became King in 1509 he appointed Linacre to be his physician. In the first year of his reign Henry VIII. married Catherine of Arragon, the widow of his brother Arthur, and later Linacre was appointed tutor to Queen Catherine's daughter, Princess Mary (who afterwards became Queen Mary).

At this period the educated people of England commenced to devote great attention to the study of Greek, a language to which very little attention had previously been paid. The flight of Greek scholars to Italy, after the capture of Constantinople by the Turks,

in 1453, had been followed by a revival of the study of the Greek language in Italy. Scholars from other parts of Europe had flocked to Italy and there studied Greek. An Englishman, Grocyn, had studied in Italy under a Greek exile Chalcondylas, a distinguished scholar, and on returning home delivered Greek lectures in Oxford which have been considered to mark a new period in English history. Linaere was also one of the scholars who greatly helped to promote the study of Greek in England at this time. Soon afterwards we read that the Dutchman Erasmus, who was devoting his life to Greek learning, and had made his way to Oxford in despair of ever reaching Italy, was so well pleased with the Greek at Oxford that "he hardly cared about going to Italy at all."

Considering the opposition, in recent years, to the removal of Greek from the list of compulsory subjects at the early university examinations in England, it is somewhat amusing to read of the strong opposition to Greek at the University of Oxford, and to a less extent at Cambridge, in Linaere's day. Yet in a short time the study of Greek became popular amongst the educated people of England, and we read that Henry VIII., Edward VI., Queen Mary and Queen Elizabeth were all fair classical scholars; and that Queen Elizabeth was a great reader of Greek.

Three great results followed the efforts of the Greek scholars, Grocyn, Linaere, Erasmus, and others, in the reign of Henry VIII.

1. Great attention was paid to the study of the Greek New Testament, and the translation by Erasmus was widely read and discussed.

2. The study of Greek was finally taken up enthusi-

astically at the English Universities, and later in the Public Schools.

3. Great attention was paid to the study of Greek medical writers. This was largely due to Linacre. Dr. Freind remarks, "Having laid in such an uncommon stock of learning he (Linacre) applied himself to the study of natural philosophy and physic: particularly he made it his business, and was the first Englishman who ever did so, to be well acquainted with the original works of Aristotle and Galen."

Linacre devoted himself with great zeal to the translation of Greek medical works. To the modern medical man it may seem absurd for Linacre to have devoted so much time to the study and translation of medical works written 2,000 years previously. But it is important to remember, that though anatomy had advanced much, medicine had advanced but little during that period; and that probably the early Greek medical works were, in Linacre's time, the best that had hitherto been written.

Linacre appears to have had a very high opinion of the value of Galen's writings, and in spite of all later criticism of Galen he is still highly regarded by many who are best able to judge.*

By translating the works of Galen, Linacre did what is done in our own day by the New Sydenham Society.

*Prof. J. J. Walshe writes in his book on "Medieval Medicine" (London, 1920): "Anyone who wants to understand this medieval reverence needs only to read Galen. . . . There has probably never been a greater clinical observer in all the world than this Greek from Pergamos."

"There are many absurdities easily to be seen in his writings now, but no one has yet written on medicine in any large way who has avoided absurdities. The therapeutics of any generation is always absurd to the second succeeding generation, it has been said. Those in modern times who know their Galen best have almost as much admiration for him in spite of all our advance in the knowledge of medicine, as the medieval people had."

He placed before English readers translations of the best foreign medical literature.

In his "History of the English people," J. R. Green has said, "the continuous progress of English Science may be dated from the day when Linacre, another Oxford student, returned from the lectures of the Florentine Politian to revive the older tradition of medicine by his translation of Galen." And Sir Norman Moore has pointed out that Linacre's books not only encouraged the study of Greek medicine, but thereby ultimately led men through the Greek observations to the collection of knowledge from nature.

Linacre's industry was very great: the following are the books which he translated from Greek into Latin, with the dates of their publication.

1. Proclus.—De Sphaerâ, 1499.
2. Galen.—De Sanitate Tuendâ, 1517.
3. „ Methodus Medendi, 1519.
4. „ De Temperamentis et de Inæquali Temperie, 1521.
5. „ De Naturalibus Facultatibus, 1523.
6. „ De Pulsuum Usu, etc., 1523.
7. „ De Symptomatibus, lib 4.
8. „ De Symptomatum Differentiis lib 1: et De Causis; lib 3: 1528.

Linacre dedicated his first translation to his royal pupil, Prince Arthur.

He dedicated his translations of Galen's preservation of health (2) and methods of healing (3) to Henry VIII. Beautiful copies of both of these, on vellum, presented by Linacre to Cardinal Wolsey, can still be seen in the British Museum.

To Pope Leo X. he dedicated his translation "de Temperamentis et de Inæquali Temperie," and reminded him of the days of his youth, when for a short period Linacre had had the privilege of studying Greek along with him in Florence.

Linacre dedicated his book "*de Naturalibus facultatibus*" (5), to Archbishop Warham, and "*de Pulsuum Usu*" (6) to Cardinal Wolsey as a New Year's gift.

The last of Linacre's translations was published after his death.

In addition to the translations just named, Linacre wrote a small Latin grammar for Princess Mary, to whom he was tutor, and at the end of his life he published a large work on Latin grammar, which was highly appreciated and long regarded as a standard work both in England and on the Continent.

The excellence of Linacre's Latin appears to have excited the admiration of foreign scholars best able to form an opinion; and we read that his translations from the Greek were carried out with the greatest care and thoroughness.

Dr. Freind considers that as regards Greek and Latin "he was much the most accomplished scholar of his age."

Medicine and literature were more closely associated in the fifteenth, sixteenth, and seventeenth centuries than they are to-day: and in Linacre's time a knowledge of Greek, like a knowledge of French and German in our own times, enabled the English medical man to read the best medical works written in another language than his own. The introduction to medicine was through the reading of Greek books in the time of Linacre, and this continued for many years. Then, as Sir Norman Moore tells us, "The lesson was at last learned and the teacher was no more needed." Of course, Greek is not now necessary in this respect. It is only its general educational value which need be

considered now, and its value in enabling us to understand the meaning of medical terms.

For 400 years interest in the Greek language and literature has been maintained. But in recent years we know of the strong opposition of many science professors to the study of the language which Linacre and his colleague so enthusiastically endeavoured to promote. This is a question on which most of us are incompetent to pass an opinion.* But the reader may be referred to the recent small pamphlet on "The Place of Classics in British Education," published by the Ministry of Reconstruction (1919), which gives reasons in favour of continuing the study of Greek. Linacre and his colleagues would, at least, be gladdened to read the opinion expressed at the end of this pamphlet (p. 17) — "Modern intellectual civilization owes its rise to the recovery of Greek literature at the Renaissance."

* Whatever view may be held respecting the general educational value of Greek, the fact remains that in medicine we are daily describing diseases and symptoms by terms of Greek origin. So long as we use these terms, even the most elementary knowledge of Greek will help us to understand their meaning and derivation; and we may add, to avoid the frequent mistakes in the spelling of such words.

Few medical men ever remember what a large proportion of medical terms and names, even the most common, are of Greek origin. Thus if we take the names of diseases and medical terms and refer to their derivation (as given in Quains Dictionary of Medicine for example) we find that 44 per cent. are of Greek derivation. (Amongst 1,853 terms 825 are of Greek origin.)

Without knowing something of their Greek derivation most of these terms are as unintelligible as Chinese names would be, and it is too late to change medical terminology.

Hence, many who have long since forgotten almost all of the very elementary Greek they required for their early university examinations, will be glad of the very little they still remember; since it enables them to understand the derivation and meaning of so many medical terms. For this reason the most elementary knowledge of Greek, such as could be gained by the study of a Greek grammar even for a few days or hours, would still be of great service to *every* medical man.

The practice of medicine was in a most unsatisfactory condition in the time of Linacre, and was conducted chiefly by illiterate empirics.

The bishop of London and the dean of St. Paul's had the power of appointing and admitting medical practitioners in London; the other bishops had the same power in their several dioceses.

Linacre's great life work was his attempt to rectify this extremely unsatisfactory condition, by founding the College of Physicians. Using his influence at Court, and with the aid of Cardinal Wolsey, he procured, in 1518, letters patents from King Henry VIII., which were confirmed by parliament, to establish a College of Physicians in London. But Linacre and his associates were left to defray all the expenses, and to the College Linacre devoted much of his wealth.

The letters patent were granted in 1518* to John Chambre, Thomas Linacre, Ferdinand de Victoria, physicians to the king, along with Nicholas Halsewell, John Francis, Robert Yaxley, and all men in the same faculty in London, to form a College or Community. They were permitted to elect a president annually, to hold assemblies, to make statutes and ordinances for the government of the College and of all who practised medicine in London and within seven miles thereof. They had the right to exclude from practice any individual not previously licensed by the President and College. Four persons were to be elected yearly to whom were entrusted the government of the profession, the examination of medicines and the punishment of offenders.

* See Munk's Roll of the Royal College of Physicians, London, 1861.

By a further Statute (14 Henry VIII.), passed 12 months before Linacre's death, it was granted that the persons previously named, along with two others of the commonality to be chosen by themselves, should be called Elects and should have the power of electing a President annually.

It was also enacted that no person, except a graduate of Oxford or Cambridge, should be allowed to practise physic in England without dispensation, unless he had previously obtained a certificate of having been examined and approved by the President and three elects of the College of Physicians.

Linacre was the first president of the College and continued to hold office until his death. The meetings of the College were held in Linacre's house, Stone House, in Knight-Rider Street (on the south side of St. Paul's Cathedral). Long after his death the meetings were continued there—the last being held on June 25th, 1614.* The house was pulled down in 1860.

Dr. Freind writes thus of the Royal College of Physicians in his *History of Physic* published 1750, "The College as a Corporation now enjoys the sole privilege of admitting all persons whatever to the practice of physic, as well as that of supervising all prescriptions. And it is expressly declared, that no one shall be admitted to exercise physic in any of the dioceses in England, out of London, till such time that he be examined by the President and three of the Elects, and have letters testimonial from them; unless he be a graduate in either University, who as such, by his very degree, has a right to practise all over England, except within seven miles of London, without

* The College of Physicians was then removed to Amen Corner; after the fire of London to Warwick Lane; and to its present site in Pall Mall East in 1825.

being obliged to take any Licence from the bishop. Thus stands this Act of Parliament to this day in full force: and it is to be hoped that it is, as the law directs, observed in every diocese accordingly."

"Linacre was the first president of this new-erected College, and held that office for the seven years he lived afterwards: the Assemblies were kept in his own house which he left upon his death, as a legacy to his community, and which we continue in possession of now. The wisdom of such an institution speaks for itself."

Thus writes Dr. Freind who had excellent opportunity of knowing the condition of the College and of the medical profession in the first half of the 18th Century. He also adds "And perhaps no founder ever had the good fortune to have his designs succeed more to his wish: this Society has constantly produced one set of men after another, who have done both credit and service to their country by their practice and their writings."

And if all this was true in the time of Dr. Freind, what may be said of the Royal College of Physicians and its influence on the medical profession to-day? Certainly no founder ever had his designs "succeed more to his wish."

Of the Royal College of Physicians of London Prof. J. P. Pye (of Galway) has written: "No professional foundation at home or abroad stands higher to-day in public estimation than this College."

Whatever opinions may be held with respect to its diplomas and examinations, and to its influence on medical science, it may be fairly claimed that the Royal College of Physicians of London has tried to uphold, as far as any College can do this, a high

standard of professional conduct and character. Also by still requiring candidates at the *final* examination in Medicine, for the Membership, to translate passages from at least two out of the four following languages: Greek, Latin, French and German, the College has shown its desire to do something to keep up the standard of general education which was so dear to Linacre. And as Sir Norman Moore has truly said "The example of his (Linacre's) life, as felt in the College of Physicians, continues a living force to this day." (History of St. Bartholomew's Hospital, vol. ii., p. 461.)

Just before his death, Linacre founded two Lectures of Physick, "Lynacre Lectures," at Oxford (assigned afterwards to Merton College), and one at Cambridge (assigned later to St. John's College).

When over 50 years of age Linacre became a priest of the Church of Rome. He was collated by the Primate to the Rectory of Mersham in Kent. The date when he was ordained deacon appears to be uncertain, but in a short space of time, we are told, he received a rapid succession of ecclesiastical preferments. According to the Rev. Canon R. G. Matthews, present Rector of Wigan, Linacre held "three benefices, and three prebends, and finally he was appointed Rector of Wigan in October, 1519, and in the next month gave up his precentorship at York to his predecessor in the Rectory." "He never resided in Wigan. . . ."

Linacre was rector of Wigan from 1519 apparently up to the time of his death in 1524. The people of our South Lancashire town of Wigan are still proud of the fact that the founder of the Royal College of Physicians of London was rector of Wigan at the end

of his career; though this fact is known to very few indeed who have not been residents in that town.

Linacre died in October, 1524, shortly before that period of strife and disorder in England which is commonly known as the "Reformation." He was buried in the old Cathedral Church of St. Paul, London, and thirty years later a monument was erected to him, with an epitaph, by Dr. John Caius, president of the Royal College of Physicians and founder of Caius College, Cambridge; but in the fire of London, 1666, the Cathedral was destroyed.

From the opinions of the writers of his time, Linacre appears to have been a physician of good judgment and great natural sagacity, and a man of high moral character. He is described as one that hated, above all, deceit and underhand-work, a true friend, dear to rich and poor alike.

Dr. Freind tells us "Wherever he found in young students any ingenuity, learning, modesty, good manners and a desire to excel, he assisted them with his advice, his interest and his purse." His portrait, presents a grave but very kindly face, and the more one looks at it, the more one likes it. (A copy of the portrait may be seen in the censor's room at the Royal College of Physicians.)

Linacre was one of the many English physicians of the past who gained great distinction in subjects outside their own profession. Owing to the close attention now required to strictly professional work, this has become more and more difficult in our own times. His great literary works in Greek and Latin, and especially the foundation of the Royal College of Physicians of London, of which he was the first president, are alone sufficient to distinguish him as

one of the world's great worthies in the medicine of the past. He was, however, more than a physician, and he cannot be better described than in the words of Prof. Pye, and in the order of these words: "Scholar, Physician and Priest."

Linacre's house, the first College of Physicians, has been pulled down; his tomb and epitaph in the old St. Paul's Cathedral were destroyed in the fire of London; but the Church of Wigan of which he was rector still remains. Though most of the Church was rebuilt 70 years ago, the fine old church tower (which dates to the thirteenth century) is the tower of Linacre's church.

REFERENCES.

JOHNSON, J. NOBLE, Life of Thomas Linacre, London, 1835.

MUNK, W., The Roll of the Royal College of Physicians of London, London, 1861.

FREIND, J., History of Physick, 4th ed., part II., 1750, London, pp. 400-415.

PYE, J. P. (Prof.), Article on Thomas Linaere in "Twelve Catholic Men of Science," edited by Sir Bertram Windle, London, 1912.

MACMICHAEL, W., Lives of British Physicians, London, 1830.

MOORE, SIR NORMAN, The History of the Study of Medicine in the British Isles, Oxford, 1908, pp. 64-66.

Article on Linacre and Wigan in the *Wigan Observer*, March 6th, 1920.

WILLIAM GILBERT.

DISCOVERER OF TERRESTRIAL MAGNETISM, AND FOUNDER
OF ELECTRICAL SCIENCE. PRESIDENT OF THE ROYAL
COLLEGE OF PHYSICIANS, 1600.

In the calendar of the Royal College of Physicians, we read, opposite the date November 30th, " Dr. William Gilbert died 1603 "; and in the list of former presidents we find the name of William Gilbert, 1600. Many medical men will not know anything about William Gilbert; others will remember reading in their college days of Dr. Gilbert, physician to Queen Elizabeth, who discovered terrestrial magnetism and devoted much attention to the study of frictional electricity; but only very few will know of his great work. Yet William Gilbert was one of the most distinguished scientific men of his age.

We read in our text books of physics that Thales, who lived about 600 B.C., discovered that amber when rubbed acquires the property of attracting light bodies, such as pieces of pith or cork.* Towards the end of the sixteenth century, Dr. W. Gilbert showed that this attractive power could be developed by rubbing other substances, besides amber, such as wax, sulphur, glass, etc., with a piece of dry flannel; and that light bodies, small fragments of paper, cork, etc., were then attracted by all these substances.

Such phenomena are studied in the science of electricity which commenced with the work of Dr. Gilbert; and the name electricity and many technical terms, are derived from the Greek name for amber—*ἤλεκτρον*.

* W. Watson, Text Book of Physics, London, 1919, p. 618.

A meeting of the Royal Geographical Society, on March 23rd, 1903, was devoted to the commemoration of the reign of Queen Elizabeth, on the tercentenary of her death; and addresses were given on the lives of the explorers of that age, on Sir Walter Raleigh, on Sir Francis Drake, and one on William Gilbert and his work by Prof. Silvanus Thompson, F.R.S. William Gilbert was described in this address as the father of electrical science. Before Gilbert there was no electrician.

William Gilbert (or Gilberd, as his name was often written) was born at Colchester in 1540. He became a student at St. John's College, Cambridge, and was afterwards elected Fellow of his College. He took the B.A. degree in 1560, the M.A. in 1566 and the M.D. degree in 1569.

For four years he travelled in Italy, and in 1573 settled in London. He became a Fellow of the Royal College of Physicians; later he was censor and treasurer, and finally president, in 1600.

Gilbert was a man of means and spent money freely (estimated at £5,000) on his experiments, books, instruments, magnets, etc. For 20 years he experimented and speculated on magnetism and frictional electricity. We are told that for 18 years he worked at his great book on this subject, which was at last published in 1600, only three years before his death. The title of the book was "*De magnetie (magneticisque corporibus, et de magno magneti tellure, physiologia nova).*" In this book Gilbert first put forward the view that the globe of the earth acted as a great load-stone or magnet, and that the tendency of the magnetic needle to point in a polar direction was due to this action. He describes the numerous experiments on

which he based this view of terrestrial magnetism, and considers the magnetic movements, the direction, variations and dip of the magnet, and gives a detailed account of loadstones and magnets generally.

Gilbert had a loadstone ground into a globular form, thus having the shape of the earth. This he named a "terrella," or little earth. By placing magnetic needles on this "terrella," he was able to make a large number of observations the results of which were similar to those noted with respect to the magnetic needle and the earth. These observations helped him to build up his theory of terrestrial magnetism. His book is devoted chiefly to magnetism, but in Chapter II. he describes a large number of phenomena somewhat resembling those which are magnetic. He showed that by the friction of glass, wax, sulphur and many other substances besides amber, an attractive power could be produced (as already mentioned). To this power he gave the name "electricity" (*electricitas*)—from the Greek name for amber *ἤλεκτρον*. To Gilbert, therefore, we owe the word "electricity," and the various electrical terms derived from this word. He discusses carefully the reason for this attraction; he excludes the common view, previously held; and he compares and contrasts the attraction of electric and magnetic bodies. We owe to Gilbert, therefore, the distinction between electricity and magnetism.

In this marvellous book he laid the foundation of terrestrial magnetism and electrical science. It is full of interesting original observations, and experiments, and demonstrates the value of the experimental method of investigation before Bacon's celebrated writings had appeared. At the end of the book Gilbert also

puts forward what he described as a "new physiology," which contains some remarkable views and thoughtful sentences that are specially interesting from a physicist. He remarks: "If there is aught of which man may boast, that of a surety is soul, is mind."

Prof. Silvanus Thompson points out that Gilbert built up a whole experimental magnetic philosophy on a truly scientific basis, and that he created the science of terrestrial magnetism. For his "masterly vindication of scientific methods, and his rescue of the subject of magnetism from the pedantry and charlatanry into which in the preceding ages it had lapsed, his memory must be held in high honour. To the names of the men who made great the age of Queen Elizabeth, who added lustre to the England over which she ruled, and made it famous in foreign discovery, in sea-craft, in literature, in poetry, and in drama, must be joined that of the man who equally added lustre in science—Doctor William Gilbert." There were explorers, naval heroes, dramatists before the distinguished men of Queen Elizabeth's time; but before Gilbert there was no electrician.

In 1601 Gilbert was appointed physician to Queen Elizabeth. In all probability he was one of the physicians who attended Queen Elizabeth in her last illness, and witnessed the distressing end of the Queen's life. We are told that the Queen was overcome with grief and remorse two years after the execution of the Earl of Essex (on learning that a ring which he had sent her had not been delivered) and that she never recovered from the shock. Mental symptoms developed and progressed. At the end she lay for four days on cushions on the floor and refused food and medicines,

in spite of the entreaties of "ten or twelve physicians that were continually about her," and then became unconscious and died.

In 1603, eight months after the death of the Queen, Gilbert died at the age of 63.

In the Town Hall of Colchester is an interesting painting by Mr. Acland Hunt. The subject was suggested to the artist by Sir Benjamin Ward Richardson. The painting represents Dr. William Gilbert exhibiting his electrical and magnetic experiments to Queen Elizabeth and her court (including Sir Walter Raleigh, Sir Francis Drake and Cecil Lord Burghley). This picture was presented to the Corporation of Colchester by the Institution of Electrical Engineers in 1903 on the 300th anniversary of Gilbert's death.

On the facade of the Colchester Town Hall are four statues, one of which represents William Gilbert.

A copy of his portrait may also be seen in the Colchester Public Library at the Town Hall.

Gilbert was buried at Holy Trinity Church,* Colchester. On a fine old mural tablet, erected in this church by his brothers, is an inscription in Latin, which tells us briefly his life record.

But, as Prof. S. Thompson remarks, his true monument is his treatise "in which he laid the foundation of terrestrial magnetism and of the experimental science of Electricity."

Gilbert did not spend his time and fortune in vain. Every reader can appreciate the enormous value of

* This church is also well worthy of a visit on account of its fine old Saxon tower. The pointed Saxon archway at the west end is said to be one of the most perfect specimens of Saxon architecture in England. Opposite the church is Gilbert's house. A visit to Colchester may be recommended to all who are interested in history and in Gilbert and his work.

his work to the world to-day, and every reader will honour the man whose contribution to the world's knowledge was the foundation of electrical science and the discovery of terrestrial magnetism; and members of the medical profession may be proud that he was a physician.

REFERENCES.

WILLIAM GILBERT of Colchester, Physician, London. On the loadstone and magnetic bodies and on the great magnet the Earth. A new Physiology. Demonstrated by many arguments and experiments. Translated by P. Fleury Mottelay, London, 1893. (The original Latin work may be seen in the Royal College of Physicians.)

Commemoration of the Reign of Queen Elizabeth. The Geographical Journal, London, June, 1903, p. 618. Address by Prof. S. Thompson, F.R.S.

THOMPSON, PROF. SILVANUS: "Gilbert, Physician: A note prepared for the 300th Anniversary of the death of William Gilbert of Colchester, President of the Royal College of Physicians, and Physician to Queen Elizabeth." (Printed by C. Willingham & Co., at the Chiswick Press, 1903.)

WILLIAM HARVEY.

DISCOVERER OF THE CIRCULATION OF THE BLOOD.

PHYSICIAN TO KING CHARLES I.

William Harvey was born at Folkestone on April 1st, 1578. He was the eldest son of Thomas Harvey, who became Mayor of Folkestone in 1600. A tablet may be seen in the parish church at Folkestone to the memory of his mother, Joan Harvey, which records her true womanly virtues.

About the age of 10, William Harvey was sent to the Canterbury Grammar School, and in 1593, at the age of 16, was admitted as a student at Gonville and Caius College, Cambridge. He took his B.A. degree in 1597, and next year travelled through France and Germany to Italy. He joined the University of Padua in 1598. Versalius had been professor of Anatomy there; Fabricius was his successor, and Harvey attended his lectures. We read that most of the work was then carried out between six and eight in the morning; but that Fabricius lectured at 9 a.m. Harvey obtained the degree of M.D. of Padua in 1602. The diploma speaks of Harvey in very high terms and may now be seen in the Royal College of Physicians, London. In the same year Harvey returned to England: he received the M.D. of the University of Cambridge and commenced practice in London. He was elected a Fellow of the College of Physicians in 1607, and soon afterwards was appointed physician to St. Bartholomew's Hospital. In 1615, at the age of 37, he was appointed Lumelian lecturer on Anatomy and Surgery at the College of Physicians.

He was very successful in his practice as a physician, and in course of time was elected physician extraordinary to King James I.

It is thought that Harvey first put forward his views on the circulation of the blood in lectures delivered at the College of Physicians about 1615: but his great work on this subject was not published until the year 1628. The title of the book was "*Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus.*" It was published in Germany, at Frankfort (am Main), which was then a famous centre for book publishing. The book was published in Latin and dedicated to King Charles I.

Harvey had for many years, by anatomical study and experiments, endeavoured to determine the function of the heart; and at one time almost despaired of being able to understand it.

Harvey pondered over the anatomical structure of the heart and its large blood vessels, the valves in the veins, the movement of blood in the arteries and veins, all of which as he tells us he failed to be able to understand "unless the blood should somehow find its way from the arteries into the veins, and so return to the right side of the heart: I began to think whether there might not be a *movement as it were in a circle.* Now this I afterwards found to be true . . ."

No actual demonstration of the circulation of the blood was possible in the time of Harvey. Harvey never saw the blood in actual circulation; the capillaries had not then been discovered. It was only a few years after Harvey's death that Malpighi by the aid of the microscope, was actually able to detect the capillaries, and to see the blood circulating in the frog.

Harvey's theory was, in his lifetime, incapable of

actual proof. It was based on reasoning and on probability; he believed what he could not actually prove: his views were based partly on anatomical and experimental facts, partly on faith, and they turned out to be correct. Harvey waited many years before he published his views on the circulation; had he waited until demonstration was possible he would never have published them.

At the time Harvey's great work was published he was 50 years of age, and as already stated for many years had worked at the subject, but had not published his views. In a letter to "the president of the Royal College of Physicians and other learned Physicians his most esteemed Colleagues" which is published in the preface to his great work, Harvey writes, "I have already and repeatedly presented you my learned friends with my views of the movement and functions of the heart in my anatomical lectures: but having now for nine years and more confirmed these views by multiplied demonstrations in your presence . . . I at length yield to the requests, I might say entreaties, of many, and here present them for general consideration in this treatise."

We are told King Charles I. took interest in his work and treated him with great respect, and witnessed his experiments.

In 1639 Harvey was appointed physician to King Charles I. and probably accompanied him during his troubled visits to Scotland and the North in 1639 and 1640. At this period of Harvey's career great events were happening in England, the record of which belongs to English history; but brief reference to some of these events is necessary in any sketch of Harvey's life.

The disputes between King Charles and a section of his parliament had rapidly become acute. For suspected treason against the "liberty of the people" the Earl of Strafford had been imprisoned, and at last King Charles had reluctantly signed his death warrant.

A few months later a "remonstrance" complaining of the King's Government was drawn up and passed by a small majority in the House of Commons, at the end of 1641. Early in 1642 King Charles had ordered the arrest of Pym, Hampden, and three other members of the House of Commons for high treason: but the members escaped. Citizens were enrolled to form a parliamentary army: the King left London and Harvey went with him. The King raised his standard at Nottingham in August, 1642, and the Civil War commenced. The parliamentary troops in London broke into the houses of persons suspected of being Royalist. As Harvey was a Royalist, and physician to the King, his rooms at Whitehall "by command of Parliament" were entered by the parliamentary soldiers, who stole his furniture and destroyed his specimens and his scientific notes on development. This was a terrible blow to Harvey who writes as follows:—"Let gentle minds forgive me, if recalling the irreparable injuries I have suffered, I here give vent to a sigh. This is the cause of my sorrow:—whilst in attendance on his Majesty the King during our late troubles, and more than Civil Wars, not only with the permission but by the command of Parliament, certain rapacious hands not only stripped my house of all its furniture, but, what is a subject of far greater regret to me, my enemies abstracted from my museum the fruits of many years of toil. Whence it has come

to pass that many observations, particularly on the generation of insects, have perished with detriment, I venture to say, to the republic of letters.”

Most physicians, whose anger in similar circumstances would probably have been expressed in strong adjectives, will admire the self-restraint of the man who, though of warm temper, asks gentle minds to forgive him if he gives “vent to a sigh” over his terrible loss.

The opening battle of the Civil War was fought at Edge Hill in Warwickshire, 1642. Harvey was with the Royalist troops at this battle, and the two princes (who afterwards became Charles II. and James II.) were under his charge in the rear. We are told that Harvey sat down under a tree and commenced to read, but a cannon ball grazed the ground close to him and caused him to move his position. (In the Royal College of Physicians an amusing small picture may be seen representing Harvey reading a book, and the two princes watching the battle). The battle was not decisive, but the parliamentary troops withdrew; the King marched on towards London and occupied Oxford on his way. He reached Brentford, a few miles from London, but did not venture further. As winter was approaching he returned to Oxford and established his headquarters there. Harvey accompanied the King to Oxford where he found many friends and admirers. Here he carried out his experiments and observations, in spite of the unrest around him. Aubrey tells us that Harvey came several times to his College to visit George Bathurst, B.D. “who had a hen to hatch eggs in his chamber, which they opened daily to see the progress and way of generation.”

It will be of interest to many students of Embry-

ology, when studying the fascinating subject of the development of the chick, to remember that the outlines of these processes (or the macroscopic changes) were worked out by Harvey at Oxford during the troubled times of the Civil War.

In December, 1642, Harvey was incorporated Doctor of Physic at the Oxford University. In 1645 he was elected Warden of Merton College, Oxford, in place of the parliamentary Warden who had fled. At this time Merton College was a very busy place: the Queen lodged for a short time in the College and officers were stationed there. Whilst Harvey was at Oxford the Civil War was fought out. The Solemn League and Covenant was formed between the parliament and the Scotch, and a Scottish Army was sent to England to aid the parliamentary troops. In 1644 the Battle of Marston Moor was fought and Cromwell's military abilities were demonstrated. In 1645 at the Battle of Naseby, the Royalists were severely defeated.

The King returned to Oxford and soon afterwards surrendered to the Scottish Army at Newark. Oxford surrendered to the parliamentary army of Fairfax, and Harvey left Oxford and retired from public life.

Amongst the few students Harvey had at Oxford was Charles Scarborough, the first English editor of Euclid, who as a Royalist had been expelled from Cambridge.

After leaving Oxford Harvey devoted himself to his studies and especially to his work on development. Mr. d'Arcy Power tells us, "His mind always philosophical and reflective rather than empirical was now allowed to follow its bent to the uttermost and his time was employed in putting into shape his treatise upon development."

At this time Harvey was 68, he had lost his wife

and one of his brothers. He suffered much from gout, and no doubt would be greatly depressed by the course of political events in England.

On surrendering to the Scottish Army King Charles had been received loyally: but he refused to sign their Solemn League and Covenant and returned to his English subjects. He was seized by a band of cavalry by the order of Cromwell, and after being imprisoned in various castles, he escaped and reached the Isle of Wight but was forced to take refuge in Carisbrook Castle, where he was imprisoned. Members unfavourable to Cromwell were prevented from entering the House of Parliament and the King's death was decided upon. The illegally constituted tribunal, the refusal of the King to be tried by this tribunal, his conviction after a few days, are facts well known to all readers of English history. King Charles was beheaded on January 30th, 1649, in front of the Banqueting Hall of Whitehall Palace.

A Commonwealth was established, but Cromwell and his soldiers ruled the country.

Harvey as a Royalist would be a suspected man, but he took no part in politics in these troubled times and found solace in his studies. Like many Royalists he would be deeply shocked by the King's execution and by the political events that followed.

A distinguished Fellow of the College of Physicians in Harvey's time, the Marquis of Dorchester, in his horror described the execution of the King as a "barbarism not to be paralleled in any history of the world: for subjects to bring their prince to a formal trial, to condemn him, and cut off his head before his own palace at noonday, and in the face of the sun, was never yet done in the Christian world." No doubt

Harvey would share these feelings. The world had not then experienced the brotherly love of the citizens of the French Revolution, of the communists of Paris in 1871, and of the Bolsheviks of Russia.

Harvey's old friend, Dr. Ent, visited him about Christmas, 1650, and found him cheerful and busy with his studies. When asked if all was well with him, we are told that Harvey replied, "How can it be whilst the Commonwealth is full of distractions, and I myself am still in the open sea? And truly did I not find solace in my studies and a balm for my spirit in the memory of my observations of former years, I should feel little desire for longer life. But so it has been, that this life of obscurity, this vacation from public business, which causes tedium and disgust to so many, has proved a sovereign remedy to me."

At this visit, Dr. Ent obtained from Harvey the manuscript of his second great work on development—"De generatio animalium," which he placed in the hands of a publisher. We learn that Harvey was very reluctant to have it published, having experienced the worry of the adverse criticism of his book on the circulation.

From this period to the time of his death, Harvey was chiefly interested in the welfare of the College of Physicians (Munk) and built at his own expense a new library and museum for the College, which was opened in 1653. On that occasion Harvey received the President and the Fellows in the new museum and gave an address. Next year he was elected President, but declined the honour owing to his age and impaired health. He lived to see his discovery of the circulation of the blood generally accepted.

In 1656 he gave his estate at Burmarsh in Kent to

the College of Physicians and directed that a portion of the income should be devoted to the institution of an annual dinner for Fellows and that on the same day a member of the College should be appointed to deliver a Latin oration, wherein should be a commemoration of the benefactors of the College, and an exhortation to Fellows and Members of the College “to search and study out the secrets of Nature by way of experiment; and also for the honour of the profession to continue in mutual love and affection amongst themselves.” This oration has been continued as the Harveian Oration up to the present time.

Harvey died suddenly on June 3rd, 1657, at his brother's house at Roehampton. The cause of death was probably cerebral hæmorrhage. The body was brought to London, but not buried for many days. On June 26th the funeral procession left London for Hempstead, in Essex, fifty miles away. It was followed by a large number of Fellows of the Royal College of Physicians for some distance outside the City wall, but probably most of the Fellows then turned back to Westminster, for on that day a great event was happening in the history of England. Cromwell's second parliament had drawn up “The Humble Petition and Advice,” and Cromwell was asked to take the title of King. Though declining the title of King he was inaugurated a second time on the day of Harvey's funeral, and given the chief powers of a monarch and the right to name his successor. Objection to hereditary succession is a strong point with republicans: but Cromwell nominated his son. Soon afterwards he dissolved his parliament and ruled alone, becoming thus in fact, if not in name, England's only kaiser, and most arbitrary ruler, and demonstrating, as has been

demonstrated so often, that thirst for absolute power is not confined to kings.

Harvey's body, coffinless and "lapt in lead," was laid to rest in "the Harvey Chapel" or vault, connected with the Church at Hempstead, and there it remained until 1883. On the breast plate of the lead case was inscribed "Doctor William Harvey, deceased the 3rd June, 1657, aged 79 years."

In 1847 the vault was visited by Sir Benjamin Ward Richardson, and often afterwards. He drew attention to the damaged condition of the lead enclosing Harvey's remains, and at last, in 1883, the Royal College of Physicians, after a report from Sir W. B. Richardson, undertook the repair of this lead mortuary chest. On October 18th of that year Harvey's remains were removed from the Harvey vault to a marble sarcophagus inside the Hempstead Church, in the presence of the President and 26 Fellows of the Royal College of Physicians. The repaired leaden case was carried to the marble sarcophagus by eight Fellows, amongst whom were Sir B. W. Richardson and Sir Norman Moore. Both have described the re-interment of Harvey.

In Hempstead Church is a marble bust of William Harvey: the face is thought by Sir B. W. Richardson to have been reproduced from a death mask, and in this opinion he is supported by the English sculptor, Mr. Thomas Woolner, R.A.

A photograph of the face alone, seen in profile, was published in *The Lancet*, November 30th, 1878, by Sir B. W. Richardson, who writes in a later article "In this delineation the reader will find himself face to face with Harvey, as Harvey in his 80th year lay dead" . . . "A quiet, placid, beautiful face even in

death, this of Harvey.” Tablets are also to be seen in the Hempstead Church* to other distinguished members of the Harvey family.

Hempstead is a very small village in Essex, 7 miles from Saffron Walden Station, and is not connected by train with any neighbouring town or village. The surrounding country appeared very beautiful and peaceful on the autumn morning when I visited the Church; but probably comparatively few medical men ever ramble to this part of Essex, and those who do will wonder why Harvey was not buried in Westminster Abbey, as no physician was ever more deserving of the honour.

But when Harvey died Cromwell was England's ruler. Harvey had been physician to King Charles I., and therefore his burial in the Abbey would in all probability have been forbidden, even if Harvey had not directed otherwise: and Harvey would no doubt have preferred to be buried in a country church rather than in the centre of London.

Might not the medical profession of England do something to improve the condition of the Church which contains the remains of England's greatest physiologist? And this thought must occur especially to those medical visitors to Hempstead Church who have ever seen the tomb of Pasteur in the Pasteur Institute in Paris.

The tower of Hempstead Church collapsed in 1882, and has never been rebuilt. An effort was made in 1906 to raise the sum of £2,000 for the rebuilding of the tower and a committee was formed. But though the vicar, the Rev. E. J. Roberts, and others tried hard

* In the Harvey vault are 70 coffins of members and descendents of the Harvey family, including that of Admiral Harvey who fought in the battle of Trafalgar.

to obtain the sum required, only £400 was received, and at last further pleadings for the scheme had to be discontinued. Hempstead is a small village with a decreasing population, and if the money is ever raised for rebuilding the tower, it cannot be done there. These are not the times for rebuilding church towers, but in the distant future, if other calls become less urgent and the regulation of trade unions more reasonable, it is to be hoped that some wealthy physician may leave the money required to rebuild the tower of the church where the remains of Harvey rest.

* * * * *

The rights and wrongs of the Civil War do not come within the scope of these sketches, except in so far as Harvey is concerned; but as regards the destruction of his specimen and notes Harvey tells us that the parliamentary troops broke into his house "not only with the permission but by the command of parliament."

Now that over 270 years have passed we can read more calmly of the history of those times, of King Charles, of Cromwell, and of Harvey.

With all his failings King Charles did at least encourage Art and Science. The monument of Harvey's King stands in Trafalgar Square near the College where Harvey is so much revered: and wreaths of flowers are still laid at the foot of this monument of King Charles on January 30th, the anniversary of the day on which he was beheaded.

In Manchester we have a monument to Cromwell, erected by a former republican mayor, but I am not aware that wreaths of flowers are ever placed at the foot of his monument. Lovers of art will indeed find it difficult to forgive him, and to-day Cromwell would

probably be repudiated by all political parties: though monarchists and imperialists, however much they may disagree with his politics, will admire his great military genius; and the old Prussian military party might fairly point to him as a fine example of a great military ruler, who made the name of England respected abroad as it had never been before.

The time may come, in the distant future, when even average educated Englishmen will know and care as little about King Charles and Cromwell as they do to-day about Cerdic or the early Saxon kings. But so long as medicine is studied Harvey's name and work will never be forgotten. He is fairly regarded as the most celebrated of English physiologists. His fame is greater to-day than it was 260 years ago, and does not diminish as years go by. Almost every year a high tribute is paid to his work and character by the Harveian orator at the Royal College of Physicians.

His great work on the circulation of the blood has been considered in these orations from innumerable standpoints, and in some of the orations, his work on development has been the subject of consideration and praise. Every student of medicine learns the importance and the outline of Harvey's work in his early training in physiology. If all the published orations and lectures on Harvey's discovery were collected together, they would form a volume of admiration and praise such as has never been written of the work of any other English physician.

In the library of the Royal College of Physicians is a fine portrait of Harvey by C. Jansen; also in the College may be seen the silver tipped probe used by Harvey in his anatomical demonstrations; and his

preparations of the blood vessels and nerves; and an account of the second burial of Harvey in Hempstead Church in 1883.

* * * * *

What might be termed Harvey's philosophy of life is of interest. Certain physicians of distinction have had a philosophy of life, which to the average healthy man must appear, at least, very unsatisfactory; but Harvey's was admirable. If we could only follow it, how much trouble would be avoided.

He appears to have been ever anxious to avoid disputes about his views, and when controversies were necessary to have conducted these most politely and with the greatest respect to his opponents. Amongst his rules for guidance in his lectures we find:—No. 6 “Not to praise or dispraise other anatomists, for all did well, and there was some excuse even for those who are in error.”

He appears to have been ever happy in his work and cheerful even in his retirement at the end of life. He tells us he found a solace in his studies, in the distracted period of the Commonwealth, and his retirement from public life proved to him “a sovereign remedy.”

In Harvey's writing we note throughout a reverential tone, and more, a very definite deeply religious feeling.

He had a great love for his profession and very friendly feelings for his colleagues, which is shown in the warm-hearted wording of his letters and writings, and in other ways. Thus in the letter to the President of the College of Physicians and to his

physician colleagues, which appears in a preface to his great work, he terminates with the words—

“ Farewell most worthy doctors,
and think kindly of your anatomist,
William Harvey.”

The last of the letters of Harvey which have been preserved was to a physician at Haarlem—John Vlackveld, and it ends thus—

“ Farewell, most learned Sir, and
whatever you do, still love,
Yours most respectfully,
William Harvey.”

These are only little signs, but they are sufficient to show his mental tone and character, and they are such as we should hardly expect to find in the cold writings of many scientific men of our own times.

Most readers of his works will also be struck by Harvey's fairness and great humility; and many will admire his character almost as much as his great scientific ability.

He tells us “ that many things are discovered by accident, and that many may be learned indifferently from any quarter, by an old man from a youth, by a person of understanding from one of inferior capacity.”

From his will, we can again obtain glimpses of Harvey's character. After the usual formal legal statements, we read—“ Imprimis, I do most humbly render my soul to Him that gave it, and to my blessed Lord and Saviour Christ Jesus, and my body to the earth” Very many “ items ” follow, giving detailed directions for the disposal of his goods and property. To the College of Physicians he gives his

books and papers, to Dr. Scarborough his velvet gown and silver instruments; and five pounds to his friend Dr. Ent, "to buy him a ring to keep or wear in remembrance of me."

More has been written of Harvey than of any other English physician. From the great importance of his work and the nobility of his character, we may fairly say that no English physician has ever been so esteemed and affectionately regarded by the medical profession, and especially by the Royal College of Physicians; and he may be truly described as the "beloved physician" of England.

REFERENCES.

- WILLIS, R., *The Works of Wm. Harvey (with Life of Harvey)*, published by the Sydenham Society, London, 1847.
 POWER, D'ARCY, *William Harvey*, London, 1898.
 RICHARDSON, SIR B. W., *Asclepiad*, 1884, p. 39.
 MOORE, SIR NORMAN, *History of St. Bartholomew's Hospital*, London, 1920, vol. ii., p. 496.
 SPENCER, H. R., *Harveian Oration*, 1921; also *British Medical Journal*, October 22nd, 1921.

FRANCIS GLISSON.

AUTHOR OF THE FIRST ENGLISH TREATISE ON RICKETS :
PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS,
1667.

The name of Glisson is associated in the minds of medical men with their earlier studies at the medical school when they were expected to know the minute anatomy of the liver and the capsule of Glisson.

Francis Glisson was born at Rampisham, Dorset, in 1597. He entered as a student at Caius College, Cambridge; graduated B.A. in 1620-21, and M.A. in 1624. He then studied medicine, obtaining the M.D. Cambridge in 1634. He was admitted a Fellow of the Royal College of Physicians in 1635. In 1636 he was appointed Regius Professor of Physic at Cambridge and held that post until his death. He resided first at Cambridge; but during the Civil War lived at Colchester, and was there during the siege by the Parliamentary forces in 1648: soon afterwards he removed to London.

At the Royal College of Physicians he was elected reader in Anatomy in 1639; later he was Censor, and from 1667 to 1669 President.

Glisson was one of a small number of distinguished men who formed in 1645 a private society or club meeting weekly in London, for the study of natural and experimental science. Dr. G. Ent and Dr. John Wilkins were also members of this small club or Society and the meetings were sometimes held at Gresham College. About 1649 two members removed to Oxford and founded there the Philosophical Society,

having the same object. This society continued until 1690, and at one time the meetings were held at the rooms of Robert Boyle. The work done by the fellows was communicated to the London Society. The meetings of the London Society at the Gresham College were interrupted for a time when that College was occupied by Cromwell's soldiers. But after the Restoration, the meetings were resumed in the Gresham College. Other distinguished scientists and medical men joined, and soon a Society was formed, in 1660, for the study and discussion of natural science and "experimental learning," the meetings being held weekly. King Charles II was acquainted with the objects and wishes of this Society and in 1662 he granted a charter and the "Royal Society" was founded. Lord Brouncker was the first President. Francis Glisson, Thomas Willis, Robert Boyle and Sir Christopher Wren were amongst the original members of the Royal Society. A large number of physicians were amongst the early members.

Glisson was an enthusiastic and accurate anatomist. He published in 1654 a work "*De Hepate*" in which he gives a careful account of the structure of the liver, and especially of the branches of the portal vein and their sheaths, to which the name of Glisson's capsule has been applied ever since his description.

His great medical work on rickets—"De Rachitide seu morbo puerili" was published in 1650. This is the first detailed account of the disease in English medicine, though in 1645 an inaugural dissertation had been published on rickets at Leyden by Daniel Whistler (later President of the Royal College of Physicians) entitled "*De morbo puerili Anglorum.*" In an interesting historical survey Dr. L. Findlay points

out, that though the disease was probably first mentioned by Soranus Ephesius, who lived between A.D. 98 and 138, and practised as a physician at Rome, it is to Francis Glisson that we are indebted for rediscovering and clearly describing it, and drawing to it the attention of the medical profession. Dr. Findlay truly says "Glisson's treatise is a monument to English medicine for all time and one cannot peruse it without being impressed by the accuracy and thoroughness of his clinical and pathological descriptions. On these aspects of the subject there has been nothing to withdraw and very little to add."

The disease had attracted the attention of Drs. Glisson, Sheaf, Bate, Regemorter, Wright, Pagett, Goddard and Trench, who were members of a small private medical society, and from the notes they had collected it was thought desirable to compose a treatise on the disease. Drs. Glisson, Bate and Regemorter were appointed to write the book; but in course of time, as so much of the work was contributed by Dr. Glisson, his two colleagues considered it only fair that the whole book should be written by him, and it was therefore published (in Latin) solely in his name. An English translation was published in 1651. In this work Glisson gave a full account of the symptoms and signs of the disease. He drew attention to the large head, the thickening of the ends of the long bones, the deformities of the legs (giving diagrams), the deformity of the chest (giving diagrams), the beading of the ribs or "the rosary" and the protuberant abdomen. He devoted a chapter to the questions "Why this disease happeneth more frequently in England than in other Countries? and Whether it be natural to Englishmen?" To the latter question he concludes that the

answer must be that the disease is “not properly common to England.”

Though the clinical description of the disease was so well established by Glisson, the exact cause has been discussed and disputed ever since. If the recent views, based on the experimental work of Dr. Mellanby should prove to be correct, that the disease is due to the deficiency in the food of a vitamine associated with fat—“the fat soluble A factor” (best supplied in treatment by cod liver oil), then this may be regarded as the second great advance in our knowledge of the disease, and the most important since the time of Glisson.

English medical men who have studied or travelled in Germany and Austria will probably have wondered why rickets is commonly described as “die englische Krankheit” in these countries, since the disease is so frequently seen also in German and Austrian children. Probably the description of the disease given by Glisson and other English physicians of his time, and the title of Whistler’s thesis, first caused the name of “the English disease” to be applied to the affection in Germany.

Sir Norman Moore considers that “Mayerne, Glisson, and Sydenham are the three clinical observers of the seventeenth century whose work deserves the first place” and that the study of clinical medicine was established in England by the practice and writings of these three physicians.

Glisson died in 1677 and was buried at St. Bride’s Church, Fleet Street, London. Though no tablet to his memory can be found in this Church, the Vicar, the Rev. Arthur Taylor, has kindly searched the

Church Register and informs me that the burial of Dr. Francis Glisson is recorded on October 22nd, 1677. His portrait may be seen in the Royal College of Physicians.

REFERENCES.

GLISSON, F., *De Rachitide seu morbo puerili*, 1650.

A study of Social and Economic Factors in the Causation of Rickets by M. Ferguson, with introductory historical survey by L. Findlay. Published by Medical Research Committee, London, 1918.

MOORE, SIR N., *St. Bart.'s Hosp. Rep.* xx., 1884, p. 71.

MOORE, SIR N., *History of the Study of Medicine in the British Isles*, Oxford, 1908.

Report on the present state of knowledge concerning Accessory Food Factors (Vitamines). Medical Research Committee, London, 1919, No. 38.

WELD, C. R., *History of the Royal Society*, London, 1848.

THOMAS WILLIS.

ONE OF THE FOUNDERS OF NEUROLOGY, AND OF OUR
PRESENT KNOWLEDGE OF DIABETES MELLITUS.

Most medical men know little of the life and work of Thomas Willis, yet few of the English Physicians of the Stuart period have left us so many excellent medical works.

Students of anatomy are, however, well acquainted with the arteries at the base of the brain known as the circle of Willis, and with his nomenclature of the cranial nerves—the nine nerves of Willis.

Thomas Willis was born in 1621, at Great Bedwin in Wiltshire. He was at school in Oxford and was afterwards a student at Christ Church. He took the B.A. Oxford in 1639, and the M.A. in 1642. This was the time of the Civil War and after the Battle of Edgehill in 1642, King Charles I. retired to Oxford. Willis joined the Royalist army and served “in the University Legions for his king against the usurper Cromwell.” He afterwards studied medicine and took the M.B. degree in 1646. He practised at first in Oxford and Abingdon. In 1660, just after the Restoration, he was appointed Sedleian Professor of Natural Philosophy at Oxford, and in the same year obtained the degree of M.D. He was elected an Honorary Fellow of the Royal College of Physicians in 1664.

He was one of the first or original Fellows of the Royal Society.

In 1666 he left Oxford for London and resided in St. Martin's Lane. In a very short time he obtained

a large practice. We are told that he was consulted respecting the ailment of one of the sons of the Duke of York (afterwards James II.), and caused great offence by giving his opinion in the words—"Mala stamina vitæ."

Willis was the writer of many books and articles on medicine. His work on the anatomy of the brain and nervous system was the most celebrated. It is a book of great value and interest and is based on his own numerous dissections and observations. Willis may fairly be regarded as one of the founders of English neurology. His figure of the base of the brain is so clear and satisfactory that it might well serve for the modern student of anatomy, and is much clearer than some of the figures in modern text books. Many other illustrations are excellent. In these drawings he was assisted by Dr. Wren (afterwards Sir Christopher Wren, the architect of St. Paul's Cathedral). His description of the blood supply of the brain, of the cranial nerves, and of the coarse anatomy of the brain was long followed in English medicine. The circle of arteries at the base of the brain is still known both on the Continent, as well as in England, as the circle of Willis. The numbers given to the cranial nerves by Willis were long followed in English anatomy; but the fibres of the 7th nerves of Willis are now usually divided into the facial and auditory nerves, and those of his 8th nerve into the glosso-pharyngeal, pneumo-gastric, and spinal accessory. The spinal nerves were also carefully described by Willis, and he gave us an account of what was known in his time of the physiology and pathology of the nervous system, and described in detail paralysis in various forms, epilepsy, apoplexy and many nervous affections. His book was

one of the first detailed English works on neurology.

Many other diseases were also described by Willis in his "*Pharmaceuticæ Rationalis*"; and many physiological and some philosophical questions considered.

Willis wrote eleven books and fortunately his collected writings, translated into English, have been published in one large volume—"The Complete Works of Willis"—a marvellous work which is to be found in many of our older libraries.

Thomas Willis deserves to be ever remembered as one of the founders of our present knowledge of the pathology of diabetes mellitus. He has left us an excellent clinical account of diabetes in which he repeatedly draws attention to the sweet taste of the urine and repeatedly emphasises this fact. He was the first European writer who mentioned the sweet taste of the urine in diabetes mellitus. He apparently saw many cases of the disease. He expresses the opinion that the diabetes is due to an affection of the blood rather than the kidneys, and attributes the disease to "an ill manner of living and chiefly an assiduous and immoderate drinking of cider, beer and sharp wines; sometimes sadness, long grief." The urine, he states is "wonderfully sweet as it were imbued with honey or sugar. But why that it is wonderfully sweet like sugar or honey, this difficulty is worthy of explanation." The explanation was given 100 years later, by Matthew Dobson of Liverpool, who pointed out that the blood serum, as well as the urine, tasted sweet, and showed that the urine contained sugar. Later Rollo demonstrated the value of diet in the treatment. Thomas Cawley in 1788 recorded a case of diabetes in which the pancreas was full of calculi and

its right extremity hard and "scirrhus." Later, many other physicians drew attention to the pancreatic changes in diabetes; but the importance of pancreatic lesions was demonstrated by Minkowski and v. Mering who showed in 1889 that diabetes can be produced in dogs by total extirpation of the pancreas. Later, it was shown that diabetes was often specially related to disease of the islands of Langerhans.

Claude Bernard, about the middle of last century, showed that glycosuria might be produced experimentally by puncture of the floor of the 4th ventricle, and by other lesions of the nervous system. Though diabetes rarely follows organic lesions of the nervous system, still many clinical observations have been recorded indicating the influence of great mental anxiety, intense grief, great shock, fright, etc., if not in producing diabetes, at least in accelerating its onset; and Willis expressed his opinion 250 years ago that long grief and sadness were sometimes factors in the etiology of the disease.

Before a satisfactory pathology of diabetes mellitus can be established very much further work is still required; but looking backwards it is clear that Thomas Willis was the physician, who by drawing attention to the "wonderfully sweet" taste of the urine "like sugar or honey," and emphasising this fact, first put the medical profession on the right track in working out the pathology of the disease.

Willis died at St. Martin's Lane in 1675 and was buried in Westminster Abbey.

We are informed that he was a very charitable physician, a man of strong religious faith and that "some years before his death he had settled a sum on the Church of St. Martins-in-the-Fields, for the daily

reading of prayers, early and late, to such servants and people of the parish who could not, through multiplicity of business, attend the ordinary service.” (Munk’s Roll.)

We are told that Willis was a great friend to the poor, and that in the latter part of his life he devoted all the fees which he took on Sundays, and which amounted to more than those of any other day of the week, to deeds of charity (Sir B. W. Richardson).

REFERENCES.

Complete Works of Willis. Dr. Willis’s Practice of Physick—eleven treatises with 40 plates—London, 1684.

MUNK, W., Roll of the Royal College of Physicians.

RICHARDSON, SIR B. W., Thomas Willis, M.D., F.R.S., Asclepiad, 1892, vol. 9, p. 53 (with excellent portrait of Willis).

THOMAS SYDENHAM.

ADVOCATE OF THE PRACTICAL CLINICAL STUDY OF
MEDICINE AND OF PERSONAL OBSERVATION OF
DISEASE. THE "FATHER" OF ENGLISH CLINICAL
MEDICINE.

Over the entrance to the Royal College of Physicians in London are three monuments—to Linacre, Harvey and Sydenham. This may fairly indicate the general opinion of the profession as to the position of honour held by Sydenham amongst the English physicians of the past.

Thomas Sydenham was born at Winford Eagle, in Dorsetshire, in 1624. In 1642 he entered as a student at Magdalen Hall, Oxford. But he left the University in a short time for military service with the Parliamentarians during the Civil War, his family being supporters of the Parliamentary side in this great struggle. In 1646 he returned to Magdalen Hall, and studied Medicine. He was made Bachelor of Medicine in 1648, without having taken a degree in Arts. Soon afterwards he was elected a Fellow of All Souls College, and remained at Oxford for some years. If he ever visited Montpellier his biographer, Dr. R. G. Latham, thinks it was probably about this time, and perhaps during a long vacation. Before 1661 he removed to London and settled in Westminster. In 1663 he was admitted a Licentiate of the Royal College of Physicians.

In the epistle dedicatory to the third edition of his work, "Medical observations concerning the history and cure of Acute Diseases," Sydenham gives us the

following brief account of his own early career:—" It is now 30 years since I had the good fortune to fall in with the learned and ingenuous Master Thomas Coxe, doctor, who was then attending my brother . . . I myself was on my way to London, with the intention of going thence to Oxford; the breaking out of the War having kept me away for some years. With his well known kindness and condescension, Dr. Coxe asked me what pursuit I was prepared to make my profession, since I was now returning to my studies which had been interrupted, and was also arrived at years of discretion. Upon this point my mind was unfixed, whilst I had not so much as dreamed of Medicine. Stimulated, however, by the recommendation and encouragement of so high an authority, I prepared myself seriously for that pursuit. Hence, all the little merit that my works may have earned in the eyes of the public is to be thankfully referred to him who was the patron and promoter of my first endeavours. After a few years spent in the arena of the University, I returned to London for the practice of Medicine.

" The more I observed the facts of this science with an attentive eye, and the more I studied them with due and proper diligence, the more I became confirmed in the opinion which I have held to up to the present hour, viz., *that the art of medicine was to be properly learned only from its practice and its exercise*; and that, in all probability, he would be the best skilled in the detection of the true and genuine indications of treatment who had the most diligently and the most accurately attended to the natural phenomena of disease. To this, then, I wholly devoted myself . . ."

In 1666 Sydenham published his work " *Methodus*

Curandi Febres propriis observationibus superstructa." In this book are considered continued fevers, intermittent fevers and small-pox. The book was reprinted at Amsterdam, and in 1668 a second edition was published, with the addition of an essay on plague. In 1676 an enlarged edition was published with the title "*Observationes Medicæ circa Morborum Acutorum Historiam et Curationem.*"

In 1676 Sydenham obtained the degree of M.D. from the University of Cambridge.

In his "*Medical observations*" he devotes a section to an account of the great plague of London in 1665 and 1666. This account has always been of great interest to medical men who have paid special attention to infectious disease and also to historians.

Sydenham published other works—on "*Epidemic diseases,*" on "*Venereal diseases,*" on gout and dropsy, and a work entitled "*Processus integri*" which records his observations on 71 ailments and their treatment.

His treatise on gout contains his famous graphic account of the disease and its treatment, and is worthy of the careful consideration of every gouty patient to-day, on account of the excellent advice it contains regarding beverages, diet, mode of life, exercise, etc. Sydenham suffered much from gout himself and he records his own personal observations on the clinical history and causation of the disease. He emphasises the value of early hours, exercise, and especially horseback riding, restriction of wines; and the injurious effects of excessive mental work. He advises that the patient should "keep the mind quiet and not be too intent upon serious matters." He remarks that "gout rarely attacks fools," but modestly adds

“ those who choose may except the present writer.”

He tells us he had determined to write a large work on the chronic diseases which he had met with; but the severe mental application to his task brought on a fit of gout such as he had never before suffered from, and he adds “ whenever I returned to my studies the gout returned to me.” And therefore he wrote the short account of gout and dropsy.

Through the influence of Sydenham’s writings the term *Chorea Sancti Viti* (*χορεία* = dancing) or St. Vitus’s dance was restricted to the minor form of the disease; whilst the major form is allied to the epidemic disorder of the Middle Ages. Hence the common form of *Chorea* is often described, especially in Continental medical works, as the *Chorea of Sydenham*.

Sydenham did much to establish the value of Peruvian Bark (Jesuits’ Bark), or *Cinchona*, in the treatment of ague; though its use had been previously strongly advocated and demonstrated by Robert Talbor.

As Sydenham did not obtain the M.D. degree until 1676, many years after he settled in London, he was therefore, up to that time inadmissible for the Fellowship according to the College regulations then in force. He remained a licentiate and was never elected a Fellow of the College of Physicians: the reason cannot now be clearly given. Whatever may have been the treatment received from the Royal College of Physicians in his own day he has been fully honoured by the College in many ways in more recent times. In the yearly College Calendar we find against the date December 29th—Dr. Thomas Sydenham died 1689; and against June 26th—Thomas Sydenham admitted a Licentiate 1663. Sydenham’s bust stands in the

Library and his monument is placed beside those of Linacre and Harvey above the entrance to the College.

Sydenham suffered from gout for over 34 years and finally from renal calculus. He died in 1689 and was buried at St. James's Church, Piccadilly, London. A small neat tablet erected to his memory by the Royal College of Physicians in 1810, may be seen in this Church.*

Sydenham had a high sense of professional duty, responsibility and dignity, and of the importance of original work for the advancement of medicine. The preface to the first edition of his book shows the character of the man, and is worthy of the careful consideration of every medical student and medical man before commencing practice. In this preface he points out to the medical man—(1) The religious duty of the practice of medicine, (2) the religious obligations of medical knowledge, (3) that it is no mean or ignoble animal that he deals with, (4) “that he himself hath no exemption from the common lot” and is “liable to the same ailments and afflictions with his fellows.” He then adds “for these and like reasons let him strive to render aid to the distressed with greater care, with kindlier spirit, and with stronger fellow feeling.”

He allows that many in his time were not influenced by these considerations, and adds “Some are swollen up with pride, and puffed out with the vain conceit of their knowledge; so that these matters seem small

*St. James's, Piccadilly, London, is not an attractive church externally, but it contains mural tablets to many distinguished medical men of the past, and is worthy of a visit by those who are interested in medical history. Tablets may be seen in this church to the memory of Dr. Thomas Sydenham, Sir Geo. Baker, Dr. Richard Bright, Sir William Bowman, Sir George Johnson, Dr. Wm. Hunter and many other distinguished medical men.

in their eyes " " The others either gape and grow greedy for gain, or else are borne away by the hopes of some small celebrity; in either case looking to their purses or to their fame." Sydenham was evidently an acute observer of men, as well as disease.

On the duty of original work, he writes that physicians " ought not to be satisfied with simply giving health to the sick, but they should strive to add greater certainty to the art that they administer, and they should so direct their experiments that the science of medicine may grow day by day more clear and more efficient."

In the preface to one of his works he writes of medical practice:— . . . " For I have always thought (and not without reason) that to have published for the benefit of afflicted mortals any certain method of subduing even the slightest disease, was a matter of greater felicity than the riches of a Tantalus or a Cræsus."

In another preface he tells us:—" I have weighed in a nice and scrupulous balance whether it be better to serve men, or to be praised by them, and I prefer the former." " And like to a brute beast is the man who has ends and aims other than the advantage of his fellow creatures."

To medical men his writings are still interesting reading. They are so original, they indicate such close attention to clinical medicine, such careful personal observation of disease, and they also show a keen sense of humour. Many readers of his books will desire to taste the Canary wine he recommends so often.

Sydenham's method was that of personal practical observation of diseases and their treatment; and his

great service to medicine was by emphasizing this method at a period when it was so much needed. Though Glisson and others had done much to establish the study of clinical medicine in England no one had previously advocated so strongly the bedside study of disease.

The stimulus he gave by his writing to clinical study and to the careful observation of diseases, has had a most beneficial influence on English medicine. We cannot read his works without being impressed by his sincerity and high character, and when all his writings on disease have been forgotten, his advice to the medical man, already quoted, deserves to be ever remembered:—

“ . . . “let him strive to render aid to the distressed with greater care, with kindlier spirit and with stronger fellow-feeling.”

THE SYDENHAM SOCIETY.

In 1843 a society was formed for the diffusion of the medical literature which by the usual means could not be expected to have a large circulation. The object of the Society was to reprint rare and expensive standard English works, ancient classical medical works and translations of recent important foreign works. To this society the name of the Sydenham Society was given. After doing excellent work for many years a new Sydenham Society was formed in

1858 with a similar object, and has continued its useful work up to our own time.

In the University Museum at Oxford is a beautiful statue of Sydenham, which is close to the bust of Sir Henry Acland, to whose exertions the foundation of the Museum was largely due.

REFERENCES.

The Works of Sydenham, T. (with Life of Sydenham), translated into English by Dr. R. G. Latham, 2 vols., Sydenham Soc., London, 1848.

RICHARDSON, SIR B. W., Thomas Sydenham, *Asclepiad*, vol. 9, 1892 (with portrait of Sydenham).

RICHARD MEAD.

ONE OF THE FOUNDERS OF PREVENTITIVE STATE MEDICINE.

Richard Mead was the son of the Rev. Matthew Mead, a non-conformist minister. He was born at Stepney in 1673; he received his early education under a private tutor at home, and we read that he distinguished himself in Greek and Latin.

At the end of the reign of Charles II., his father was unfairly suspected of some political offence against the Government, and to escape persecution fled to Holland. Richard Mead was sent to study at Utrecht in 1689, and in 1692 went to Leyden, and devoted three years to the study of Medicine.

Boerhaave was a student at Leyden at the same time as Mead, and a lifelong friendship between the two commenced at this period.

In 1695, after completing his studies at Leyden, Mead travelled in Italy with his brother and two friends. He took the degree of Doctor of Philosophy and Physic at Padua in 1695. After visiting Naples and Rome, he returned to England and commenced practice in Stepney.

In 1702 he published a book entitled "The Mechanical Account of Poisons," and in 1703 he was elected physician to St. Thomas's Hospital. About this time he communicated to the Royal Society an account of Bonomo's work on scabies which had demonstrated that the disease was due to the *acarus scabiei*.

He was elected a Fellow of the Royal Society in

1704, and at a later date (1717) a Vice-President. In 1707 the degree of M.D. was conferred upon him by the University of Oxford. He was admitted a Fellow of the College of Physicians in 1716, and was Censor from 1716 to 1724. His practice having become very large, he resigned his post at St. Thomas's Hospital in 1714.

In 1719 a serious epidemic of plague occurred at Marseilles. It was feared that the disease would spread to England; the opinion of Mead was sought and he declared that the disease was contagious. Mead was requested to write directions for the prevention of plague; therefore, in 1720, he published his famous book, "A Short Discourse Concerning Pestilential Contagion, and the Methods to be used to Prevent it." Seven editions were published in one year and two editions later.

For the prevention of plague he recommended: "(1) the preventing of its being brought into our island, and (2) if such a calamity should happen the putting a stop to its spreading amongst us."

For the first he recommended a system of quarantine, and he considered that "the best method of stopping infection is to separate the healthy from the diseased."

Mead writes: "There is no evil in which the great rule of resisting the beginning more properly takes place than in the present case." He advocated: The establishment of a Council of Health; notification of infected cases; early visitation by official medical advisers; separation of the healthy and diseased; isolation of infected families; the non-affected to be stripped of all their clothes and washed and shaved before going into new lodging; cleansing of the houses,

the goods to be burnt or buried deep. Mead recommended that all expenses should be paid by the public, and that a reward should be given to the person who first discovered the infection.

Sir George Newman writes*: "In all this we see the foundation of the administrative practice of modern preventive medicine, of which Mead was one of the great inventors."

Mead's book is only a small one, but it is full of valuable thoughtful practical recommendations, and is a marvellous work. Had he written no other works, this alone is sufficient, considering the period at which it was published, to give Mead a high place amongst the English physicians of the past, and amongst the world's great benefactors.

He read a paper at the Royal Society on the invention of Samuel Lutton for ventilating the holds of ships, and indicated the value thereof. After 10 years he persuaded the Lords of the Admiralty to adopt it.

He wrote a discourse on scurvy, basing his remarks largely on the disease as it was observed in Lord Anson's voyage round the world.

Mead was called in consultation to see Queen Anne two days before her death, and at this most critical period in the history of England, he gave a prompt and definite prognosis, which was of some political importance.

By the Act of Settlement passed in the reign of William III. (1701) it had been decided that the sovereigns of Great Britain should be protestants and

* An outline of the Practice of Preventive Medicine, London, 1919, by Sir George Newman, p. 12.

that in the event of King William and his sister-in-law, Princess Anne (afterwards Queen Anne) dying childless, the Crown should pass to Princess Sophia of Hanover and her heirs. Nearer heirs were passed over because of their religious faith—they were Catholics.

Now at the end of the reign of Queen Anne, Princess Sophia having died, many of the Tory party were unwilling that the crown should pass to Sophia's son, George, Elector of Hanover, and they were not unwilling to support Queen Anne's half brother James, who was, of course, the nearest heir. But we are told the main obstacle in the way was the fact that James was a Roman Catholic, and that "he would not deny or dissemble his faith."* If this was the reason why he lost his crown then we must honour him. At the end, however, of Queen Anne's reign in 1714 secret preparations were made for a revolution by the opponents of George, Elector of Hanover; but before these were completed Queen Anne had an attack of apoplexy. Mead was called in for consultation, and, in opposition to other opinions, promptly gave his prognosis that she would not long survive. This prognosis was correct. In English history we read how prompt action was taken and revolution prevented and the Elector of Hanover became George I. of England.

Mead attained the highest position in his profession. He attended Sir Isaac Newton in his last illness, and in 1727 was appointed physician to King George II.

In his old age, after retiring from practice, Mead

* Prof. T. F. Tout, *An Advanced History of Great Britain*, London, 1920.

wrote in his leisure a book entitled "Medical Precepts and Cautions," and another entitled "Medica Sacra."

He died in 1754 and was buried in the Temple Church. A monument to his memory was placed by his son in Westminster Abbey. His portrait, bust and Padua diploma may be seen in the Royal College of Physicians.

Mead was extremely successful in practice; his income was very large and he lived in princely style; but his charity and hospitality were great; to the poor and to the clergy he gave advice without fee.

He used his large income to encourage fine arts and literature, and was a great collector of books, medals, pictures, etc. In his house, in Great Ormond Street, he built a gallery for his collections.

Sir Norman Moore remarks: "Of the many men who have grown rich in professions few have expended their riches during their lives so generously and so wisely as Mead."

MacMichael writes: "The good of mankind and the honour of his country were two of his ruling principles. He persuaded the wealthy citizen Guy to bequeath his fortune towards the foundation of the noble hospital which has honourably consecrated his name."

He was also one of the earliest promoters of, and subscribers to, the Foundling Hospital.

Although he was most successful in his practice and two large fortunes were bequeathed to him, his benevolence and mode of life prevented him from leaving great wealth to his family; but MacMichael tells us that "he acted according to his conviction, that what he had gained from the public could not be more

worthily bestowed than in the advancement of the public mind; and he truly fulfilled the inscription which he had chosen for his motto:—

“NON SIBI SED TOTI.”

REFERENCES.

MEAD, R., *Medical Works* of, London, 1762.

MEAD, R., *A short discourse concerning pestilential contagion and the methods to be used to prevent it*, London, 1722, 8th edition.

LEMAN, *Some memoirs of the Life and Writings of the late Dr. R. Mead*, London, 1755.

MACMICHAEL, W., *Lives of British Physicians*, London, 1830, p. 155.

MOORE, SIR NORMAN, *Dictionary of National Biography*—Article “Richard Mead.”

WILLIAM HEBERDEN.

THE ADVOCATE OF CAREFUL CLINICAL OBSERVATION,
AND OF THE COLLECTION AND RECORDING OF FACTS.

William Heberden was born in 1710 in London and educated in that city. In 1724 he became a student at St. John's College, Cambridge, and six years later was elected a fellow. He studied medicine in Cambridge and London: he took the M.D. Cambridge in 1739; and for ten years lectured on *Materia Medica* in that University.

In 1746 he became a Fellow of the College of Physicians, and settled in London two years later. He was elected a fellow of the Royal Society, in 1769, and an associate of the Royal Society of Medicine of Paris in 1778.

For 30 years he paid close attention to his medical practice in London; as he became older, to relieve the great strain of practice, he purchased a house at Windsor, to which he retired during some of the summer months, but returned to London in the winter and continued his practice.

In 1766 he founded the *Medical Transactions* of the Royal College of Physicians for the collection of observations on the history and treatment of diseases, and in these transactions he published a number of valuable articles.

Heberden was the first physician in England who recognised and described *Angina Pectoris*. He gave the disease this name by which it has ever since been known, and specially drew attention to the affection.

His account of the symptoms is published in the Medical Transactions of the College of Physicians, Vol. 2, p. 59. It is said that cases presenting similar symptoms had been described previously on the continent.

In Vol. 3 of these Transactions, Heberden published a letter written to him by an unknown medical man who had read his article, and who suffered from symptoms similar to those Heberden had described under the name of Angina Pectoris. The unknown writer stated in this letter that he had left instructions in his will that, if he died suddenly, Heberden should be permitted to order an autopsy, so that, if possible, the cause of the affection should be determined. The writer of this letter died suddenly three weeks later, and Heberden obtained an autopsy. No definite cause for the affection could, however, be detected; but as Heberden remarks though the autopsy did "not inform us what the cause of the disease was," it was of service "by informing us what it was not."

In the same volume, Heberden published a letter from Dr. Wall in which he records that calcification of the aortic valves was found at the autopsy in a case of Angina Pectoris.

These articles are of much historical interest, and show how our present knowledge of the disease was built up.

In another article in the Medical Transactions Heberden emphasises the value of distilled water as a beverage, and mentions the case of "one Francis Secardi Hongo who made distilled water his constant drink without the addition of wine or any strong liquor, to the last, and lived with remarkable good

health to the age of 115 years.” (This was before the days of temperance reformers, when water drinkers were so rare).*

But Heberden's most important work was his “Commentaries on the History and Cure of Diseases” published both in Latin and English at the end of his professional life. It is founded entirely on notes taken at the bedside and written in Latin. It is still a very readable book, and full of common sense observations, and entirely original.

Sir N. Moore tells us, in his most interesting “History of the Study of Medicine in the British Isles,” that clinical observation was firmly established in England at the beginning of the eighteenth century, and he considers that “its perfection and precision, before the development of special methods of physical observation, is reached in the “*Commentarii de Morborum Historia et Curatione*” of Dr. William Heberden, published in 1802, the last important medical treatise in England which appeared in Latin.”

Heberden was very cautious with respect to drugs. He admits that in his time the title of specifics may be fully claimed for “Peruvian bark for the cure of agues; quicksilver for venereal disorders; sulphur for itch; and perhaps opium for some spasms; and Bath water for the injury done to the stomach by drinking.” But he considers that it is uncertain if more than 10 other remedies could then be definitely shown by experience to be of value as specifics.

At the conclusion of his commentaries is a very

* Apart from this side of the question it is to be regretted for many reasons, that Heberden's advice has not been followed, and *distilled* water freely used as a beverage and table water. (It can now be obtained in a palatable form, aerated or still, from various firms, and Stretton water and Malvern water, are almost as pure as distilled water.)

humble, admirable chapter, from which we quote the following:—"It might be expected that the experience of fifty years spent in the practice of physic would have taught me more than I here appear to have learned of distempers and their remedies. I readily confess my knowledge of them to be slight, and imperfect; and that a considerable share of this imperfection is chargeable upon my want of ability to make a better use of the opportunities I have had: but at the same time it must be allowed, that some part must be put down to the very great difficulty in making improvements in the medical art." He points out the slow progress which has been made in 2,000 years and gives as the reason for this difficulty especially the "unknown peculiarities" and "additional powers" of living bodies "the operations of which can never be accounted for by the laws of lifeless matter."

He adds "the art of healing therefore, has scarcely hitherto had any guide but the slow one of experience."

Heberden strongly urged the importance of careful clinical observations. He considered that by the "empirical method" only—the method founded on facts recorded by others or observed by ourselves, has the practice of physic been established.

This brings us to a consideration of the value of inductive and deductive methods about which logicians have so long delighted to dispute. Most ordinary individuals, who have ever thought about the subject will probably consider that those are right who think that the best results may be expected from a combination of both methods. Many will, therefore, not altogether agree with Heberden's conclusions, if strictly interpreted: but all will recognise the very great value

of his efforts, especially in his own age, to promote careful clinical observation, note taking and accurate recording of facts. This was especially desirable in his day, but fact collecting and note-taking are as important now as in the past, though it must be admitted that we have many weary fact collectors and note-takers, who do not appear to be able to make much use of the facts they have collected.

Heberden died in 1801 at the age of 91. He was buried in Windsor in the Windsor parish church (St. John's), close to the castle, where a tablet has been erected in his memory, which tells us that—

“ William Heberden, M.D., died the 17th day of May, 1801, in the 91st year of his age, and was buried near this place. He practised physic first in Cambridge, afterwards in London, with great and unsullied reputation above 50 years. His extreme learning, his integrity, his gentleness of manners and active benevolence, raised him to an uncommon height in public esteem. Above all, his sincere piety, founded on a diligent inquiry after religious truth regulated his conduct through a long and busy life, and supported him to the last with unabated cheerfulness and resignation.”

We are told that Heberden was an accomplished scholar, a man of the purest integrity of conduct and of great modesty and dignity of character; that he was a deeply religious man and true Christian; that he had “an ardent thirst after knowledge,” and an earnest desire to promote the welfare and happiness of all mankind. We read that these qualities were “accompanied with great sweetness of manner,” and that he acquired the love and esteem of men “in a degree

which perhaps very few have experienced ”; and that though eminent by his skill as a physician, he conferred a more valuable and permanent lustre on his profession by the worth and excellence of his private character.

Heberden’s extensive practice made it inconvenient for him to accept the appointment of physician to the Queen: but he recommended in the most disinterested manner, an able but little known physician as a substitute.

London was apparently no better in Heberden’s days than now, and we read in McMichael’s account of his life that “ after being in collision with the vices and follies of a metropolis during nearly half a century ” he appears to have contracted none of them. He was undoubtedly, in medical practice, a man of facts and not of theories; but unlike many “ men of facts ” he was a man of lofty ideals and sentiments.

REFERENCES.

HEBERDEN, W., *Commentaries on the history and cure of diseases*, London, 1806.

Medical transactions of the College of Physicians, vol. 2 and 3.

MACMICHAEL, W., *Lives of British Physicians*, London, 1830.

MUNK, W., *Roll of the Royal College of Physicians of London*, London, 1861, vol. ii.

SIR GEORGE BAKER (BART.).

INVESTIGATOR OF THE SOURCES OF CHRONIC LEAD POISONING. PRESIDENT OF THE COLLEGE OF PHYSICIANS.

Sir George Baker was born in Devonshire in 1722. He was the son of the Rev. George Baker, Vicar of Modbury, and Archdeacon and Registrar of Totnes. He was educated at Eton, was afterwards a student at King's College, Cambridge, and later a fellow. He obtained the B.A. in 1745, the M.A. in 1749, the M.D. in 1756, and the Fellowship of the College of Physicians in 1757.

At first he practised at Stamford in Lincolnshire, but about 1761 removed to London. He was very successful; he rapidly attained one of the highest positions in the profession, and became a fellow of the Royal Society. At the College of Physicians he was a Censor from 1761 to 1780, and was afterwards President for 9 years, 1785-1790; 1792-1793; and 1795.

He was physician to King George III., and was created a baronet in 1776.

We read that he was a most distinguished classical scholar that "his great delight was in objects of literature and in the society of literary characters," and that he was "remarkable for a most tenacious memory." But it is not for his classical learning and literary ability that he will be remembered, but for the great value of his work in medicine, in tracing out the cause of Devonshire colic and of the "colic of Poitou," and in drawing attention to the toxic action of lead and the many sources of chronic lead poisoning.

Sir George Baker was a native of Devonshire, and was well acquainted with a form of colic very common in his time in that county, which was known as "Devonshire colic," and was produced by the drinking of cider. This colic was attributed to the acid of the cider and to various other causes; but Sir George Baker noted the similarity of the symptoms to those caused by lead poisoning, and after careful consideration, finally came to the conclusion, that the cause of the colic was not to be sought for in the mere acid cider, but in some adventitious, either fraudulent or accidental, adulteration with lead. He commenced careful investigations, the results of which he recorded in five communications read at the Royal College of Physicians in 1767. He found that this form of colic was common in all parts of Devonshire, and was more frequent there than in other parts of England. Over 70 cases of this ailment were admitted to the Devon and Exeter Hospital yearly about this time. He found that in Hereford, Gloucester and Worcester this form of colic very rarely occurred. To account for this difference he sought for same cause in the utensils employed in making cider. He found lead was frequently used in preparing the utensils and machinery. He examined chemically the cider of Devonshire and Hereford and found lead in the former but not in the latter. He recorded in detail his observations, and concluded that Devonshire colic was due to the contamination of the cider in this county with lead. By his perseverance in urging the discontinuing of the use of lead in machinery and utensils, we are told he was "the means of preserving the health and lives of thousands," and that in 1818 this disease was then "hardly known to exist there."

In another communication, he considered several means by which the poison of lead may be supposed frequently to gain admittance into the human body, unobserved and unsuspected, through utensils, lead vessels, lead pipes, etc.

He carefully considered and discussed the history and supposed causes of the "colic of Poitou." He quoted from ancient medical writers to show that colic and paralysis as results of lead poisoning were known to the ancient Greeks, and came to the conclusion that the colic of Poitou, painters' colic, the "dry belly-ache" of the West Indies, and similar affections, known by different names in various lands, are probably due to lead poisoning.

These researches are justly regarded as models of the method of inquiry desirable in investigating the cause of disease.

In one of his communications to the Royal College of Physicians Sir George Baker records, in detail, the amusing history of a very unhealthy, overfed, extremely stout, intemperate man, who by reducing his diet greatly and discontinuing all fluids (except those contained in his food) became thin, active, and healthy, and lived for 18 years. We are told that this gentleman urged poor working men to restrict their diet, both on the grounds of health and economy, and that they regarded him as their enemy. The case is of scientific interest as a human experiment, and is worthy of consideration, especially by all so called working men, and all men not so called who suffer in a similar way from similar causes.

In another paper Sir George Baker discusses intermittent fever, and gives us an interesting history of Peruvian Bark. The action of Peruvian Bark in ague

was nearly as much discussed in his time, and in the hundred years previously, as the action of quinine is in our own time; and to those who have followed the work published in English medical literature during the last six years on the action of quinine in malaria the remarks of Sir George Baker will be of interest. He points out in his conclusions that had it not been for the casual experience of an uncivilized people this valuable drug might never have been discovered, that it might have long remained unknown had it not been for the influence of a great religious society, the Jesuits,* and that for the most effective way of using it we are indebted to a man who was not a physician—Talbor.

Sir George Baker held the highest position in the profession in his time. He died in 1809 at the age of 88 and was buried at St. James's Church, Piccadilly, London, where a tablet to his memory may be seen close to the altar. His portrait is in the Royal College of Physicians.

* It was long known as Jesuit's bark or powder.

REFERENCE.

BAKER, SIR GEORGE, Medical tracts read at the College of Physicians between 1767 and 1785 collected and republished by his son, London, 1818 (with short biography).

JOHN LATHAM.

PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS,
1813-1819.

John Latham was the son of the Rev. John Latham, B.A., of Siddington, Cheshire, and was born at Gawsworth in Cheshire in 1761. He was educated at the Manchester Grammar School, and afterwards at Brazenose College, Oxford. He obtained the B.A. degree in 1782, the M.A. in 1784, the M.B. in 1786, and the M.D. in 1788. He commenced practice in Manchester and was appointed physician to the Manchester Royal Infirmary, but resigned after two years. He removed to Oxford and was appointed physician to the Radcliffe Infirmary, but he only remained in Oxford a short time and then settled in London. He became a Fellow of the Royal College of Physicians in 1789. From 1789 to 1793 he was physician to the Middlesex Hospital, but resigned this post on being appointed physician to St. Bartholomew's Hospital in 1793.

Dr. Latham soon became actively interested in the College of Physicians, and in 1792 he undertook to re-arrange the library which had fallen into great disorder. He accomplished the task in a manner so satisfactory that he was voted £100 (Dr. Munk's Roll). He became Censor of the College of Physicians in 1790.

Dr. Latham soon obtained a large practice and was appointed physician extraordinary to the Prince of Wales in 1795, and was later re-appointed physician when the Prince ascended the throne as George IV.

At the age of 46 we read that Dr. Latham was worn out by the hard labour of his early success. He was believed to be suffering from consumption and he retired to his country residence at Sandbach, Cheshire, and was not expected to recover. But after complete rest from work for two years he recovered and returned to London, and with a smaller practice and more regular mode of life he continued his professional work for 20 years.

He was elected a Fellow of the Royal Society, and at the College of Physicians he was Gulstonian Lecturer, Croonian Lecturer and Harveian Orator.

He was President of the College of Physicians from 1813 to 1819. As he only spent 2 years of his professional life in Manchester, he can scarcely be regarded as a Manchester physician; but he was an old Manchester Grammar School boy, and he is, I think, the only physician who ever served on the Honorary staff of the Manchester Royal Infirmary who has been elected President of the Royal College of Physicians.

During the 2 years of rest already mentioned, and the early period of his renewed work in London, he revised his medical notes, and published his experiences of diabetes, in a book entitled "Facts and Opinions concerning Diabetes." Latham distinguished two forms of diabetes—saccharine and serous, and recognised the difference between diabetes mellitus and diabetes insipidus. He may thus be regarded as one of the founders of our knowledge of diabetes insipidus. In his book he gives us an excellent account of the history of diabetes, and especially emphasises the previous clinical work of Willis. The facts he records are now well known; and though his opinions would be

criticised, like those of every other medical writer who has ventured to put forward any views respecting this disease, one cannot read his work without being impressed by his fairness and modesty.

He also published a work on gout and rheumatism which contains much valuable common sense advice, written in the same modest style.

On resigning his post at St. Bartholomew's Hospital he gave £100 to the hospital and in his letter to the treasurer he speaks of the feeling of gratitude he shall ever entertain for an institution where he had spent "the best part of his days very happily in an *humble attempt to be useful*." [The italics are ours.]

In 1829, at the age of 68, he left London and retired to Cheshire where he lived for 14 years. He died in 1843 at the age of 82, and was buried at Sandbach Church.

His portrait may be seen at the Royal College of Physicians and an engraving from it in the Manchester Royal Infirmary.

The writer of his obituary notice in the Medical Gazette, May 8th, 1843, speaks of the affection and esteem with which he was regarded by the medical profession and by his patients, of his sincerity, straightforwardness and liberality, and of his kindness to students, and concludes with the following impressive sentence:—"More, therefore need not be said of Dr. Latham, except that he was singularly temperate, when temperance was hardly yet thought to be a virtue; he was most pure in life and conversation when to have been otherwise would have provoked no censure; and he was not ashamed to be religious when religion

had yet no recommendation or countenance from the world."

REFERENCES.

LATHAM, J., Facts and opinions concerning diabetes, London, 1811.

LATHAM, J., On Rheumatism and Gout, London, 1796.

MUNK, W., Roll of the Royal College of Physicians, London, 1861.

MOORE, SIR NORMAN, History of St. Bartholomew's Hospital, London, 1920.

PETER MERE LATHAM.

ONE OF THE FIRST ENGLISH ADVOCATES OF AUSCULTATION.

Peter Mere Latham was the second son of Dr. John Latham (whose life has just been briefly sketched), and Mary the daughter of the Rev. Peter Mere, Vicar of Prestbury in Cheshire. He was born in 1789 and was educated, first at Sandbach in Cheshire, and later at the Macclesfield Grammar School. As a child his health was not good. As a schoolboy he is said to have hated Latin and Greek; but he must have paid great attention to these subjects later, for he gained the undergraduate's prize for Latin verse at Oxford, and had a good knowledge of Greek up to the end of life. He entered as a student at Brazenose College, Oxford, in 1807 and obtained the B.A. in 1810, and the M.A. in 1813. He studied medicine at St. Bartholomew's Hospital and obtained the M.B. in 1814 and the M.D. Oxford in 1818, and the same year became a Fellow of the College of Physicians. In 1815 he was elected physician to the Middlesex Hospital and physician to St. Bartholomew's Hospital in 1824. Just before leaving the Middlesex Hospital, Latham was employed along with Dr. Roget in investigating an epidemic disease in the General Penitentiary at Millbank. Of this epidemic he wrote a detailed account. Whatever may have been the real nature of the disease, we are told that it was apparently at length cured by mercury.

For 4 years, from 1816-1820, Dr. Latham, in association with Dr. Southey, delivered lectures on the practice of physic.

In 1836 he published his book "Lectures on subjects connected with Clinical Medicine." In these lectures he strongly advocated the practice of auscultation, which had been so enthusiastically introduced by Lannec in France.

Lannec was born in Brittany in 1781, and studied medicine in Paris. He introduced the stethoscope into medical practice and worked out his great system of auscultation when physician at the Necker Hospital in Paris. The following is Lannec's account of his discovery:—*

"In 1816 I was consulted by a young person who was labouring under the general symptoms of diseased heart. In her case percussion and the application of the hand were of little service because of a considerable degree of stoutness; the other method, that namely of listening to the sounds within the chest by the direct application of the ear to the chest wall, being rendered inadmissible by the age and sex of the patient." Lannec continues "I happened to recollect a simple and well known fact in acoustics, and fancied it might be turned to some use on the present occasion. The fact I allude to is the great distinctness with which we hear the scratch of a pin at one end of a piece of wood on applying our ear to the other.

"Immediately on the occurrence of this idea I rolled a quire of paper into a kind of cylinder, and applied one end of it to the patient's heart and the other to my ear. I was not a little surprised and pleased to find that I could thereby perceive the action of the heart in a manner much more clear and distinct than I had ever been able to do by the immediate application of the ear.†

* Taken from Prof. Collingwood's Life of Lannec.

† Lannec's early stethoscope was tubular and of wood.

“From this moment I imagined that the circumstance might furnish means of enabling us to ascertain the character, not only of the action of the heart, but of every species of sound produced by the motion of all the thoracic viscera, and consequently for the exploration of the respiration, the voice, the râles, and perhaps even the fluctuations of fluid effused in pleura or pericardium. With this conviction I forthwith began at the Necker Hospital, a series of observations from which I have been able to deduce a set of new signs of diseases of the chest.”

At the time of Lannec's discovery Latham had just been appointed physician to the Middlesex Hospital. During the next 20 years great attention was paid to the use of the stethoscope and to Lannec's work, both on the Continent and in England. In his “Clinical Lectures on Diseases of the Heart,” Dr. Latham gives us a careful account of the progress of cardiac auscultation up to 1836, and records his own experiences and opinions as to its value and limitations. He substituted English terms from those used by Lannec and did much to introduce auscultation into English medical practice.

Latham gave his lectures and visited his patients at an early hour in the morning; and we read that one result of this was “that very few of the students, rarely more than ten, went round the wards with him.”

His view of the spirit in which medical study and work should be carried out is shown in the following quotation from his lectures. After stating that *the diseased human body* will be the study and care of his hearers, he proceeds:—

“And is it possible to feel an interest in all this?

Ay, indeed it is; a greater, far greater interest than ever painter or sculptor took in the form and beauties of its health.

“ Whence comes this interest? At first, perhaps, it seldom comes naturally: a mere sense of duty must engender it; and still, for a while, a mere sense of duty must keep it alive. Presently the quick, curious, restless spirit of science enlivens it; and then it becomes an excitement and a pleasure, and then the deliberate choice of the mind.”

“ When the interest of attending the sick has reached this point, there arises from it, or has already arisen, a ready discernment of diseases, with a skill in the use of remedies. And the skill may exalt the interest, and the interest may improve the skill, until, in process of time, experience forms the consummate practitioner.

“ But does the interest of attending the sick necessarily stop here? The question may seem strange. If it has led to the readiest discernment and the highest skill, and formed the consummate practitioner, why need it go further?

“ But what if humanity shall warm it? Then this interest, this excitement, this intellectual pleasure, is exalted into a principle, and invested with a moral motive, and passes into the heart. What if it be carried still further? What if religion should animate it? Why, then, happy indeed is that man whose mind, whose moral nature, and whose spiritual being, are all harmoniously engaged in the daily business of his life; with whom the same act has become his own happiness, a dispensation of mercy to his fellow-creatures and a worship of God.”

Latham's lectures are full of valuable clinical observations and are still deeply interesting reading: especially valuable are his lectures on Angina Pectoris. Latham's lectures may fairly rank amongst the best of English clinical lectures on medicine. The excellent work which he did on cardiac diseases, and his high reputation as an author on these affections, caused him to be known, at the middle of the last century, as "Heart Latham."

Much discussion is now taking place as to the methods of training of medical students. Though written over 75 years ago, the advice and methods of Latham are still worthy of careful consideration, by all teachers and students of medicine, and by examiners. His warning respecting the limitation of the time devoted to clinical work, and his advice on the importance of the student being guided to observe for himself, were never more needed than to-day. Latham insisted on the importance of "self-teaching" by the student, and the danger of over teaching on the part of the physician; he strongly advocated strict attention to work in the hospital wards, and urged the limitation of the number of lectures in Medicine and Surgery. Latham remarks:—"I have always thought that, in our schools, every mode of lecturing has been unduly exalted above clinical lecturing; and every place where knowledge is to be had, or is supposed to be had, has been unduly preferred to the bedside; and I continue to think thus." Of clinical lecturing itself he urges that the teaching should be as much as possible at the bedside.

All this is true to-day, at least with respect to the hospital I know best.

Latham's remarks on pathology and treatment are

still worthy of careful consideration. No doubt they would be considered "old fashioned" when first published, for many of the first physicians of his time appeared to regard pathological anatomy as the most important aim of medical work. But this is no longer the case in our own time. Whilst recognising how much the profession owed to the work of the best physicians of his time in pathology and diagnosis, Latham laments the lack of attention and interest in treatment shown by so many of such physicians, who appeared to regard treatment as a humbler and less worthy part of their work. Of this attitude he writes:—"For this ought not to be. Medicine as it begins to touch on our higher interests, even the interest of life and death, should feel itself in alliance with higher motives than any which can be thought to help and quicken its pursuit as *meré Science*."

Owing to the heavy strain of work, his health became impaired and in 1841 he resigned his post at St. Bartholomew's Hospital. We read that he was then one of the foremost physicians in London, and had been appointed physician extraordinary to the Queen 4 years previously. He continued to contribute to Medical Literature, but in 1865 retired to Torquay, where he resided until his death at the age of 86, in 1875. The account of his happy old age and period of retirement at Torquay is given in the interesting Memoir written by Sir Thomas Watson. We are told that he was a man of strong religious convictions, that he was "a charming companion, full of various information affluent in anecdote, with a keen sense of fun and humour," and that his life was governed by an imperative sense of duty. His love of order and method are also recorded, and Sir Thomas Watson sums up his

character by describing him as an “example of that peculiar English character, the unobtrusive but accomplished and high-minded Christian gentleman”; certainly he was one of the brightest examples of the English physician of the past.

REFERENCES.

LATHAM, P. M., Clinical Lectures, Vols. I. and II. Complete Works. (Diseases of the heart. Report on Millbank epidemic. Medical Education, etc.) New Sydenham Society. Containing Memoir by Sir Thomas Watson (Bart.), London, 1876 and 1878.

COLLINGWOOD, PROF. B. J., Life of Lannec in the book entitled Twelve Catholic men of Science, edited by Sir Bertram Windle, M.D., F.R.S., London, 1912.

HERBERT, T., Lannec's Treatise on mediate auscultation of the lungs and heart, edited by Dr. T. Herbert, London, 1846, p. 4.

WEST, C., P. M. Latham, in memoriam of, *Medical Times and Gazette*, August 7th, 1875, p. 169.

RICHARD BRIGHT.

THE DISCOVERER OF NEPHRITIS.

Richard Bright was born at Bristol in 1789. He matriculated at the Edinburgh University in 1808 in the Faculty of Arts, but commenced to study Medicine in 1809.

He interrupted his studies for some months, in 1810, by paying a visit to Iceland, along with Sir G. S. Mackenzie, and Mr. (afterwards Sir Henry) Holland.

On returning to England he continued his medical studies in anatomy and surgery in London at the combined school of St. Thomas's and Guy's, under Sir Astley Cooper, Clines and Travers; and became much interested in morbid anatomy. About this period he also devoted attention to geology, and read a paper at the Geological Society on the strata near Bristol.

He returned to Edinburgh in 1812 and studied medicine under Gregory, and geology and natural history under Professor Jameson. He obtained the M.D. in 1813.

Desiring to graduate also at Cambridge he entered Peterhouse, but after two terms he left the university and returned to London.

In 1814 he travelled on the continent, visiting Belgium and Holland, and studying medicine in Berlin. He afterwards visited Vienna and spent the winter of 1814-15 at the Vienna Medical School, which was then at the height of its reputation. In the spring of 1815 he visited Hungary.

In the summer of 1815 he commenced his journey home, reaching Brussels two weeks after the Battle of

Waterloo. He delayed his homeward journey to attend the military hospital work at Brussels for a short time.

In 1816 he became a licentiate of the Royal College of Physicians, and obtained the post of Assistant Physician at the London Fever Hospital.

In 1818 he again travelled abroad, visiting Germany, Italy and France.

Bright first distinguished himself, not in medicine, but as a writer on foreign travel, in which, as a young man, he was keenly interested. In 1818 he published a very large and valuable work entitled "Travels from Vienna through Lower Hungary, with some remarks on the state of Vienna during the Congress in the year 1814." Hungary was a country little known to Western Europe in those days and Bright's work is full of information respecting that most interesting land. The book furnishes a most valuable and readable account of Bright's travels, and of life and society in Hungary and Vienna 100 years ago; and gives in a concise form much historical information. All who have studied or travelled in Austria and Hungary in the latter half of the last century or in the early years of the present century, will find Bright's book deeply interesting. It is not merely a popular sketch of travels in Hungary: it furnishes much detailed information on geography, and on the habits and life of the inhabitants of Hungary, and contains illustrations and maps. The book demonstrates clearly Bright's character. It shows his great abilities as a careful observer and industrious collector of facts, before these abilities had been demonstrated by his work in medicine.

Bright finally settled in London in 1820 and was appointed Assistant Physician to Guy's Hospital. In

1824 he became full physician, and held the post until 1843, when he became consulting physician.

During the period he was on the active staff he worked very hard in the hospital wards and post-mortem room. We are told that for many years he spent at least 6 hours a day in the hospital (Guy's). He lectured first on botany in relation to *materia medica* for three years. He commenced his clinical lectures in 1823. In 1824 he commenced to lecture on medicine. At first he lectured conjointly with Dr. Cholmley, and afterwards for many years with Dr. Addison.

Along with Dr. Addison he published a text book of medicine in 1839.

In 1827 he published the first volume of his famous "Select Reports of Medical Cases," demonstrating the importance of morbid anatomy in the study of disease. In the first volume he recorded his famous discovery, showing that one form of dropsy was due to kidney disease. The symptoms of dropsy had long been known to medical men: dropsy from heart disease, and ascites from disease of the liver had been long recognised. Shortly before Bright's time Blackhall had made the very important discovery that in many cases of dropsy the urine was coagulated by "heat and nitrous acid": but neither he nor any other physician had connected albuminous urine and dropsy with disease of any organ. It was Bright who showed by his pathological observations that in these cases of dropsy with albuminous urine marked changes are found in the kidneys post-mortem.

Bright pointed out in his "Select Reports of Medical Cases," vol. 1, p. 1, that the morbid appear-

ances found post-mortem in patients dying with dropsy varied exceedingly. He mentions that one great cause is obstructed circulation, as in diseases of the heart, which produces general effusion both in cavities and in cellular tissue; that obstruction to the circulation through the liver gives rise to ascites; and that ascites may also be due in diseases of the peritoneum.

Bright then proceeds—"There are other appearances to which I think too little attention has hitherto been paid. They are those evidences of organic change which occasionally present themselves in the structure of the kidney where these conditions of the kidney to which I allude have occurred, I have often found the dropsy connected with the secretion of albuminous urine, more or less coagulable on the application of heat. I have in general found that the liver has not in these cases betrayed any considerable marks of disease On the other hand, I have found that where the dropsy has depended on organic change in the liver, even in the most aggravated state of such change, no diseased structure has generally been discovered in the kidneys, and the urine has not coagulated by heat. I have never yet examined the body of a patient dying with dropsy attended with coagulable urine, in whom some obvious derangement was not discovered in the kidneys." Vol. I of these Reports, containing Bright's account of his discovery, was published in 1827; but he tells us that he observed his first case of kidney affection associated with dropsy nearly twelve years previously.

In this volume, Bright described the symptoms and pathological macroscopic changes in the kidneys in numerous cases of dropsy associated with albuminous urine, and gave excellent coloured plates.

He carefully described the various forms of disease which have since been known as Bright's Disease.

In Vol. 1 of Guy's Hospital Reports (1837) Bright published "Cases and observations illustrative of renal disease accompanied with the secretion of albuminous urine," and another article, "Tabular view of the morbid appearances occurring in 100 cases in connection with albuminous urine." He published a further article on the subject in Vol. 5.

Bright's views were soon accepted throughout the medical world and the kidney changes have been since described as Bright's disease in all countries where medicine is studied.

No medical man has better earned, by his careful work and industry, the honour of having his name attached to any disease than Richard Bright.

Vol. 2 of Bright's reports is devoted to cases of brain pathology with large excellent coloured plates. In this volume is an account of the pathological anatomy in the celebrated case of hydrocephalus—Cardwell.

Bright devoted much attention to diseases of the nervous system and one of his cerebral cases is of much interest in the history of medicine.

Bright published in 1836 a "case of epileptic convulsion from local disease" (suppuration between the dura mater and arachnoid) Guy's Hospital Reports, Vol. 1. He records the symptoms which corresponded to those now known as unilateral epilepsy, followed by paralysis. He considers that the epileptic attack was due to a *local* affection rather than a general state, "*The degree of consciousness which was observed to be retained during the fit*" he regards as a point in favour of this view and mentions three other similar

cases. (The words in italics are so printed in Bright's paper.)

He also adds "the epileptic character seemed to point to the membranes and surface of the brain as the parts most affected." All this was published in the year 1836.

He thus appears to have recognised the characters of unilateral epileptic fits and to have regarded them as cortical in origin, though he did not emphasise their diagnostic importance as was done after his time.

Second in importance to his work on kidney affections was his series of articles on abdominal tumours. These were published first in the Guy's Hospital Reports and afterwards by the New Sydenham Society (in 1860), under the title of "Clinical Memoirs on Abdominal Tumours, and Intumescence." This is a work of great clinical value and full of careful observations. Especially valuable are his observations, with microscopic examination, on hydatid cysts of the liver. The editor of this work, Dr. G. H. Barlow, tells us in his preface that Bright's description of acephalocyst hydatids is altogether original, and certainly an anticipation of similar observations which have since been published in Germany.

Bright was elected a Fellow of the Royal Society in 1821 and a Fellow of the College of Physicians in 1832. He was Gulstonian Lecturer at the Royal College of Physicians in 1833, and Lumelian Lecturer in 1839. In 1837 he was appointed physician extraordinary to Queen Victoria.

He died in 1858, and was buried at Kersal Green Cemetery. In St. James's Church, Piccadilly, London, is a tablet placed to his memory, which tells us that he died "while in the full practice of his profession

after a life of warm affection, unsullied purity and great usefulness." His portrait is in the library reading room of the Royal College of Physicians.

Bright's biographers tell us that he was a man of clear judgment, and of great industry: an accurate observer and an enthusiastic collector of facts. His abilities as an observer were shown in his work on Hungary, before he distinguished himself in medicine. He was a good linguist and was very fond of foreign travel. We are told that he was cheerful and of an affectionate disposition: and his biographers lay special stress on two traits of his character—his love of truth and his sense of duty.

We may learn much respecting Bright's character from an admirable address which he gave, at the commencement of a course of lectures on the practice of medicine in 1832.

After indicating the importance of the course of instruction the students were commencing, and the responsibilities of the profession for which they were preparing, he proceeds:—

"To you affectionate children will look for the welfare of their parents; to you the anxious parent will turn for the rescue of his child; and on you the fond husband will depend for all that is dear to him in the hour of danger; to you perhaps may be confided the lives of numerous men led to the field of battle, or marched through unwholesome countries; to you the health and efficiency of crews destined to long and perilous navigation may be entrusted; on you the public eye is to be bent in days of plague and pestilence—for who shall now say that from such visitations even our happy climate may be free? And under all these circumstances you must be ready to give an account of

what has been done, not only to those who are eagerly collected around you, but to a much more troublesome inquirer within, who will accompany you to the retirement of your closet, and with its inquisitorial voice not only ask you whether you have done your best upon the present occasion, but whether from the time you commenced your professional studies you used your utmost exertions to acquire that knowledge which would fit you for the discharge of your duties; for it is this consciousness alone which can enable you to lie down with comfort when harassed by the occasional unsuccessful issue even of your best endeavours."

He gives a note of warning as to the danger of our feelings becoming "too obtusely blunted against the sufferings, both mental and corporeal to which we are necessarily rendered familiar," and points out how essential it is "that we should all be on our guard in this particular, to check ourselves occasionally in our forgetfulness, to place ourselves in imagination in the situation of our patient or his friends, to weigh the expressions we employ."

On medical ethics Bright gives the following advice:—"Many are the moral questions which will arise to you in your professional life, and for the solution of which you must turn to a strict code of ethics, not printed on the leaves of a book, but engraved upon the tablet of the mind. These questions will refer, not only to your patients, but to you, amongst yourselves, as fellow practitioners." He points out "that it would be no easy matter to enumerate the questions, or write out the code by which they could be answered. But it is satisfactory to know that a cultivated understanding, an upright mind, and a full determination to act on the golden rule which our

religion has provided for us, as regulating our conduct towards our neighbour, will either anticipate and prevent the emergency, or point out our line of duty when it arises.”

REFERENCES.

BRIGHT, R., *Travels from Vienna through lower Hungary*, London, 1818.

BRIGHT, R., *Select Reports of Medical Cases*, London, 1827.

BRIGHT, R., *Articles in Guy's Hospital Reports*, Vols. 1 to 5.

BRIGHT, R., *Clinical Memoirs on Abdominal Tumours and Intumescence*. Preface by Dr. G. H. Barlow. New Sydenham Society.

BRIGHT, R., Address delivered at the commencement of a course of Lectures on the Practice of Medicine, London, 1832.

PAYNE, J. F., Article "Bright, R." *Nat. Dictionary of Biography*.

WILK, SIR S., and G. T. BETTANY, *Biographical History of Guy's Hospital*, London, 1892.

Since these sketches were written a very valuable account of Bright's medical work, by Sir Wm. Hale White, M.D., has been published in *Guy's Hospital Report*, 1921.

CONCLUDING REMARKS.

These sketches contain much which may not appeal to certain readers; much which perhaps cannot appeal to them; since character is without real meaning to a certain class of scientific and highly educated men, many of whom, no doubt, are meek and mild enough. For such these sketches were not written; but we trust that for others they will be of interest, and perhaps helpful.

It is not one of the failings of the present age to over-rate the value of the work of men of the past; but the opinion expressed by an old physician, Sir Gilbert Blane, is as true to-day as when it was written

100 years ago.* “ It is quite impossible for any single individual, however gifted, to acquire a competent knowledge of any subject, particularly in that which is practical, without being more or less indebted to the previous labours and discoveries of others; and he who disclaims all obligation and dependence on these, is little less culpable by his flippancy, self-conceit and inordinate love of novelty, than the others by their slavish complaisance.”

Considering the disadvantages of their times, we must marvel at the work accomplished by most of these old English physicians whose lives have been sketched, and I think we must admire also their noble characters.

* Elements of medical logick, London, 1825, p. 316.

